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THE PENNSYLVANIA BEEKEEPER

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THE PENNSYLVANIA BEEKEEPER

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ALLEGHENY COUNTY BEEKEEPERS ASSOCIATION

The Annual Meeting of Allegheny County Beekeepers Association was held at Carnegie Library, Pittsburgh, N. S., Wednesday, March 20, 1935. Principal speaker was Mr. E. J. Anderson, Extension Apiarist of State College. Notice of this meeting was sent out to over 400 beekeepers and fruit growers of Allegheny County.

The By-Laws were changed so that the annual dues of One Dollar (\$1.00) will include membership in Penn'a State Bee-Keepers Association and "Penn'a Beekeeper." 4-H Club boys dues will be fifty cents.

We now have twelve members in the State Association and hope to soon have fifty or more.

Mr. Henry R. Eby, our County Agriculturist, and staunch friend of the beekeepers, gave us a short address.

The following officers were elected: President, John S. Fleck, 625 Kirtland St., Pittsburgh, Pa.; 1st Vice Pres., Albert T. Keil, Mars, Pa.; 2d Vice Pres., Guy P. Daniels, McDonald, Pa.; Sec'y-Treas., Lee K. Havekotte, 433 Marshall Ave. N. S., Pittsburgh, Pa.

ARTICLE ON HONEYBEES APPEARS IN NATIONAL GEOGRAPHIC

A rather long and interesting article on the life of the honeybee appeared in the April issue of the National Geographic. This article was written by Mr. J. I. Hambleton, Chief of the Bee Culture Laboratory, Washington, D. C.

The National Geographic is one of the finest magazines published since it is purely educational in nature containing articles relating to exploration, foreign lands, animals, birds, insects, etc. The magazine is beautifully illustrated so that the children get a lot from it as well as do the older folks.

Any one interested in this publication can write to: G. W. Hutchison, Secretary National Geographic Society, Washington, D. C.

MEETINGS OF THE PENNSYLVANIA STATE BEEKEEPERS ASSOCIATION

Harrisburg, Penna.

1935

The Farm Show Building

Room "D"

January 23d, 10:00 A. M.

Meeting called to order by the President—Edwin J. Anderson, State College, Pa.

Address of Welcome—R. H. Bell, Director, Bureau of Plant Industry, Harrisburg, Pa.

While the attendance is not so large, I am glad to see so many of you here, and to see how much you have contributed to the success of this show. It has been my privilege to be somewhat associated with this show for some eighteen years, and I can say from my own observation that there has been no other institution more earnest and sincere insofar as contributions are concerned. And this is one reason why it has begun to be recognized as one of the leading of its kind. I am sure that I have voiced the attitude of those interested in the show in saying that you are most welcome to this year's Farm Show in Harrisburg. Your exhibits have shown consistent improvement, and this year I understand that you have staged the largest and best exhibit that you have ever put on. Though I am not familiar with apiculture myself, I understand that the exhibit is one of the best of its kind in the country. Your constructive criticism will always be welcome.

Convocation—The Reverend H. M. Snively, Carlisle, Pa.

The Benefits Derived from Beekeepers' Meetings—J. S. Fleck, Pittsburgh, Penna.

It is of considerable benefit for Beekeepers and others interested in Bee Culture to get together in meetings such as we are having here at Harrisburg, to discuss matters and exchange ideas as to the best methods and practices in the handling of bees.

In our state meetings, we Beekeepers have had the privilege of hearing from leading authorities in Apiculture and exchange views and experiences that will help us in our own field to get greater satisfaction and profit out of our work. We have had such able bee men as Dr. E. F. Phillips, of Cornell University, Mr. Charles A. Reese, of Ohio, Mr. Latham, of Connecticut, Mr. E. G. Carr, of New Jersey, Mr. H. B. Kirk, Mr. E. J. Anderson, Mr. Charles N. Greene, Father Martin G. Hepner, and a host of other able men from Pennsylvania. They have told us how to treat Foul Brood. The Best Methods and Practices in Producing Honey, Marketing of Product, Pollination of Fruit Bloom, and other kindred subjects.

We can all become more interested and enthused about our work if we get together with others similarly interested and exchange ideas and learn of the improved methods of doing things.

It is also of great value to us to become acquainted with persons from other fields and get the benefit of their experience.

There are comparatively few men who are entirely engaged in the industry in Pennsylvania. Most Beekeepers give only a small portion of their time to Beekeeping and many are interested only as a pastime or a hobby.

I am sure that many of us look forward to these meetings, and our County Association Meetings with considerable interest and anticipation of real pleasure in association with our Fellow Beekeepers.

May we take from these meetings those things which will enable us to be better men and more successful Beekeepers and thus the time and expense entailed in our coming here will be very much worthwhile.

Bee Disease Eradication—Chas. A. Reese, in charge of Apiary Inspection, Columbus, Ohio.

THE SECRETARY-TREASURER'S REPORT BY MR. A. T. KEIL

The report from the Publishing Committee is very encouraging. We received from advertisers \$170, which is \$20 more than received last year. So you see that there must have been some hustling.

Received from:

The I. I. Root Co.	\$ 25.00	Paid Out:	
The Fred W. Muth Co.	25.00	For April Issue	\$ 77.48
W. J. Lauver	25.00	Mailing April Issue	5.67
Walter S. Schell	13.00	For July Issue	6.16
Jasper Knight	13.00	Printing Oct. Issue	44.00
J. B. Hollopeter	7.00	Mailing Oct. Issue	5.16
A. I. Root Co. of Phila.	7.00	Letter Postage	2.07
I. W. Scott Co.	7.00		
D. W. Howell	7.00		\$140.54
Chaapels Seed Store	7.00	Paid to Sec.-Treas. by Publish-	
C. H. Kohler	7.00	ing Committee	29.46
Allen Latham	4.00		
Floyd Sandt	4.00		\$170.00
J. M. Stewart & Co.	4.00	To be paid for Jan. 1935 issue....	\$ 49.81
Thielmans	4.00		
Reynoldsville Hdwe. Co.	4.00		
W. T. Falconer Co.	7.00		

Total\$170.00

I believe that some of you remember my saying "I want 600 members next year" when I was elected last year. We did not get them. However I hope that we will reach that goal this year.

Secretary-Treasurer's Report. February 1, 1934 to January 18, 1935 which does not include any Memberships received at any Regular Meeting.

CASH RECEIPTS

2 U. S. Bonds	\$2,000.00—88347.H
	88348. J
Savings Account	185.56
Dues 99 Members	106.00
Interest U. S. Bonds	62.50
Interest Savings Account	4.92
For Bee Journals	2.50
From Publishing Committee	29.46

TOTAL\$2,390.94

CASH DISBURSEMENTS

Publication July Issue	\$ 52.27
Stationery and Postage	41.23
Bee Journals	2.52
Surety Bond \$5,000	12.52
Picnic Expense	4.05
Note \$50 in bank 2 mo. at 50c per mo....	1.00
Miscellaneous	1.50
Cash in bank Jan. 18, 1935	90.29
U. S. Bonds	2,000.00
Savings Account	185.56

TOTAL\$2,390.94

Members of the Auditing Committee were appointed as follows: Frederick Hahman, Floyd Sandt, Walter A. Doud.

Members of the Resolutions Committee were appointed as follows: John S. Fleck, A. C. Trainer, Charles S. Hess.

ADJOURNMENT 12:10 P. M.

January 23d, 1935, 1:30 P. M. Meeting called to order by the President.
Address in Memory of Father Martin G. Hepner and Mr. Charles N. Greene.

MR. JOHN S. FLECK

I am sure that there are many in our Association, and in this room, perhaps, who were closely associated with our beloved members who have gone from us during the year—Father Martin G. Hepner, of North East, Penna., and Mr. Charles N. Greene, of Troy, Penna. Since I was asked to make this address, I secured information from those who had been closely associated with them.

Since we last met here in Harrisburg, one year ago, the Grim Reaper has invaded our ranks and called to their eternal reward two of our esteemed and beloved associates, Father Martin G. Hepner, and Mr. Charles N. Greene. They were two of the most active and interested members of our State Association. We will all remember the very active part these men took in the State Meetings, and will always hold in loving memory the kindly association with them.

My first acquaintance with Mr. Greene was made in Pittsburgh in 1920 when he assisted in the forming of our Allegheny County Beekeepers Association, and my first meeting with Father Hepner was here at Harrisburg at the Annual State Meeting in 1932, when we met at the Secretary's desk paying our dues to Mr. Greene. It was a very cordial meeting, and I have very pleasant recollections of the fellowship with him at these meetings.

In the death of these two gentlemen the State Association and Bee Culture in general has suffered a distinct loss.

Mr. Charles N. Greene passed away at his home in Troy, Pa., Nov. 1st, 1934. He was well known to most Beekeepers in Pennsylvania, having had charge of Apiary Inspection for many years, and was always ready to respond to any calls from the field and to give help to Beekeepers wherever he could. I am informed that he was Secretary-Treasurer of the Pennsylvania Beekeepers Association for 14 years, and took his work seriously, and was the main force in getting the present effective Bee Laws. He was Chief Apiary Inspector for ten years. He was instrumental in building up the permanent fund of the Association. He was an honest and conscientious worker, and always strove for what he believed to be for the best interests of the beekeepers and the association. In his death the beekeepers and the association have lost a true and loyal friend, and thus has passed another of the older generation of beekeepers.

The Reverend Martin G. Hepner, C. SS. R. died instantly at St. Mary's College, North East, Pa., Monday, May 21, 1934. I can do no better than to quote from the account of his passing as given in "The Lake Shore Visitor" of May 25, 1934.

"Stricken as he was about to don his vestments to celebrate Benediction in the Chapel of St. Mary's College, North East, Pa., the Reverend Martin G. Hepner C. SS. R. died before medical aid could reach him May 21, 1934. The death of Father Hepner terminated twenty-six years of service in the Priest-

hood, all of which he spent at St. Mary's College, where he gained a national renown as an Apiarist.

Father Hepner was born October 21, 1875, at Breslau, Selisia, Germany, of Jewish parents. He came to America at the age of 21, and was baptized and received into the Catholic Church May 27, 1899, and was ordained into the Holy Priesthood on July 2, 1908."

Next to his priestly duties, bees were dearest to Mr. Hepner's heart. He not only loved the bees, but the fellowship with his brother beekeepers. He was at his best when talking to another beekeeper.

Election of Officers

The Officers of the previous year were unanimously re-elected, to serve for the coming year. They are: President, Edwin J. Anderson; Vice-President, E. G. Cornwell; Sec'y-Treas., A. T. Keil.

Mr. Keil thanked the members for the help they gave him last year and asked for co-operation in the coming year in order to reach the goal of 600 members, and made a promise and threat that if they did not get out and hustle for members to reach this amount they could look for another Sec'y-Treas. next year.

REPORT OF APIARY INSPECTION IN PENNSYLVANIA

By H. B. Kirk, Entomologist, in charge of Apiary Inspection, Harrisburg

In order to make the work of the inspectors effective, it is quite essential for the beekeepers to inform the inspectors when they know of an infected apiary that has not been reported. This is something which we know you do not like to do, but please remember that by neglecting to give us the whole story, you are definitely hindering the success of our project.

A clean-up plan of inspection adopted several years ago was conducted in fifteen counties during the season of 1934. 5,365 apiaries were inspected, representing 36,185 colonies of bees. 7.8 p. c. of the colonies inspected were found, on first inspection, to be infected with American Foul Brood. Of this number 75 p. c. were treated or destroyed during the first inspection. The remaining 25 p. c. were taken care of within the fourteen-day period or destroyed in September or October by the State inspector. Several inspectors are usually employed during the month of September to clean up apiaries of delinquent beekeepers, but owing to a shortage of funds, it became necessary for the chief inspector to do as much of the disease follow-up work as possible. It was necessary to make one prosecution in connection with this work.

All apiaries in which American Foul Brood was found in 1934 will be re-inspected this spring in connection with the illegal hive follow-up work. The number of colonies inspected was five per cent. greater per inspector than the year previous. The number of colonies burned was more than double compared with the number burned the previous season. While the percentage of disease remains about the same, the illegal hive condition has been materially improved since 1929. Fayette County, which had not been previously covered with a complete inspection prior to 1934, showed the greatest

number of illegal hives. Our records show that the number of box and cross-comb hives in Fayette County equals the number found in the remaining counties inspected in 1934. Consequently, the time formerly spent in inspection and follow-up work on illegal hives can be used to advantage in our disease eradication work.

While we are making a gain each season on the number of colonies inspected and a substantial reduction in the number of illegal hives, we are not covering the State often enough to control disease in the most satisfactory manner. A sufficient number of inspectors should be employed to cover the State once every three years.

I would recommend the following rules to be followed by the beekeepers in our disease eradication work:

1. Learn to know the different bee diseases in their early stages.

It is surprising the number of beekeepers in the State who are good honey producers but who are not well acquainted with the various bee diseases. Send to the Bureau of Plant Industry, Harrisburg, Pennsylvania, samples of brood comb from your colonies which you suspect are diseased. Mark on the sample which disease you think it is, and keep sending samples until you are sure you can tell one disease from the other.

2. Make periodical inspections for bee diseases.

By making careful periodical inspections you will soon be able to find the first few cells of any of the brood diseases. It is important to find signs of infection as soon as possible, so as to reduce the risk of spreading disease whether you treat or burn.

3. Burn American Foul Brood colonies rather than treat them.

I cannot emphasize too strongly that colonies infected with American Foul Brood should be burned, no matter how slight the infection. An exception may be made where all colonies in the apiary are infected and where they are treated at one time.

4. Try to explain to your neighboring beekeepers the purpose of apiary inspection.

A great deal of delay is experienced in educating indifferent beekeepers as to the necessity of apiary inspection. A good beekeeper in any neighborhood can be of great assistance by explaining to doubtful neighboring beekeepers just why it is so important to inspect every colony of bees in a district whether honey is produced for sale or not.

5. Assist the department in obtaining lists of beekeepers in your district.

Another delay in carrying on our inspection work is the difficulty in getting complete lists and keeping in touch with colonies that change hands. A plan has been adopted by one of our adjoining states to make a complete county inspection the year following the first initial inspection. This plan is reported as working out very satisfactorily. The objection to this plan is that with only seven inspectors employed, it would take about ten or twelve years to cover the state with a complete inspection.

6. Report any disease or illegal condition to the Bureau of Plant Industry Office.

The following table gives a summary of the apiary inspection work from 1927 to 1934 inclusive.

SUMMARY OF APIARY INSPECTION WORK FROM 1927 TO 1934

	1927	1928	1929	1930	1931	1932	1933	1934
No. of inspectors	4	5	8	14	15	15	7	10
Weeks of inspection	52	63	125	190	226	224	121	138
No. of apiaries	2,128	2,249	4,412	7,187	7,397	8,486	3,964	5,365
No. of hives in average apiary	7.3	9.5	8.5	6.7	6.4	6.5	7.3	6.7
No. of colonies inspected	14,070	14,028	28,112	48,246	47,587	53,548	29,155	36,185
Percentage diseased	3.4	11.9	16.0	9.9	6.8	9.8	7.0	7.8
Percentage in unlawful hives	23.6	22.2	32.0	19.4	19.3	15.0	13.0	9.5
Colonies burned				537	2,163	4,130	1,051	2,275
Prosecutions	1	13	130	89	19	7	6	9
Paid fine or served time	1	13	126	78	15	0	2	5
Applications for license for selling queens	12	13	12	8	6	8	8	8
Licensed queen apiaries	5	8	6	6	5	7	6	8

REARING QUEENS TO SUIT THE CUSTOMER

By Allen Latham, Norwichtown, Connecticut

About fifteen years ago, maybe twenty, an order came for another queen from a customer, who in speaking of a queen already received wrote "she suits

me." Those words appealed to me and since that time I have advertised queens under the trade name "She-Suits-Me."

The words are very suggestive. If a queen-breeder sends out queens which do not suit the customer, he is not likely to get repeat orders. Yet the words do not always fit, for customers vary in their likes, and in the same mail any queen-breeder is likely to receive letters that condemn his queens as well as those that praise them to the skies.

A word about the origin of my stock. Shortly before the world war began European foul brood swept over Connecticut and in two or three years wiped out about 75 per cent. of all colonies. The disease actually wiped hundreds of small beekeepers off the map. During the first decade of this century one would see hives of bees at every third farm house on most any road in Connecticut. From three to ten colonies were kept by many a farmer. About 1916 the only beekeepers left in Connecticut were the enthusiasts who repopulated their hives and the experts who combatted the disease from the first.

While I was fighting this disease, very ignorantly at that time, one of the inspectors of our state wrote to me and asked if I should like a certain old queenbee? He said that in his round of inspection he came across an apiary of twenty colonies entirely free from European foul brood. In that apiary he picked up an old queen which interested him. He thought that I might like to breed from her. He learned that the stock in this apiary was obtained from Robey, a queenbreeder whose advertisement was often seen 20 years ago.

I accepted the old queen and at once bred some daughters from her, and was well pleased. I sent to Robey for a breeding queen paying the small sum of \$5. My stock called "She-Suits-Me" originated from the old queen from that Connecticut apiary and from the breeder I obtained from Robey.

Two or three years later, feeling that my stock was not up to par, I wrote Robey asking him for some more queens. He replied that he was no longer breeding queens. I offered him \$5 each for half a dozen untested queens from one of his old breeders. He refused my offer. What should I do?

I from that day kept my eyes open for every queen which showed by shape and work that she carried the Robey stock characteristics, and every such queen was taken to the home yard and tested out. I did this for years, and today I have in my yards any number of queens which would rank well compared with the \$5 breeder Robey sent me during the late war.

So much for stock. Stock is not all. A careless breeder with the finest stock may send out poorer queens than a good breeder whose stock is not so good. Good stock is essential to get the best queens. What else is essential in the rearing of queens to suit the customer?

Answering that question would be very simple if all customers had the same likes and dislikes. One asks for queens yellow to the tip, another asks for leather-colored queens, a third asks for copper-colored queens, a fourth asks for big, robust queens and once in a while a man sends in seventy or eighty cents and asks for a large queen yellow to the tip, very prolific, one that throws workers all uniform, one that throws yellow drones, one whose bees are very gentle and easy to handle, one whose bees are hustlers for honey, and one whose bees cap comb-honey white—all for eighty cents.

Sometimes I reply to such a request that if the writer knows of a queen such as he describes, I will write out a check for \$50 at once for her provided she is for sale. I have such queens but I never sell them. I might sell one for \$200 if the sum were offered. One time in my yard I pointed to a hive and said that I wouldn't take \$200 for the queen in that hive. The friend with me thought I was foolish. Was I? The next year I would have been glad to sell her for even \$50, but not when the statement was made. That year I sold some 1000 queens from that breeder and many and many a letter did I receive expressing pleasure over daughters of that queen. From her, of course, I obtained worthy successors.

Yes, stock is very essential, but the method of rearing a queen is equally important.

Possibly no two breeders rear and mate queens in exactly the same way. We have different notions. We like different methods. Of the two recognized general methods I adopted the Doolittle method of rearing the virgin and combined it with the Alley method of mating said virgin. I graft cell-cups and mate my queens in baby nuclei.

Several very important points must be observed in the grafting. Cups must be of proper diameter and length. I prefer to let the bees have the cups for five or six hours prior to the grafting. They get the cups into a condition which yields better acceptance.

Next there must be a surplus of nurse-bees in the height of milk-production. The cell colony as well as the colony from which the larvae are to come must have abundance of food, especially of pollen. It is folly to try to rear queens in a scarcity of pollen.

The queen to be the mother of the prospective virgins must be in perfect health and not too old. I am sure that I have in the past clung too long to favorite breeders, not realizing that in their impaired strength, their off-spring might be short-lived.

The larvae selected must be from eggs laid during the midst of an egg-cycle. They must not be from a queen which is tapering off for a rest.

In selecting the larvae there is great latitude as regards age and condition. I wish I knew the limits closely, and that I knew just the very best age to use. There is need of study here. I have studied the matter much myself, but must confess that I have never come to absolute base-rock in the matter.

However, I do know that one is safe if he selects a larva which is lying on an abundance of food, provided he lift up some of that food when he grafts. Float the larva out of its bed and float it into its new bed. It is always wise if one fails to lift a larva satisfactorily the first try, to let that larva go and start on another.

The question of stocking the cups at first with royal jelly is a matter of choice. Fine queens can be reared either way. Personally I prefer to place in each cup a tiny drop of diluted jelly.

It matters little what the temperature of the day is. Unless it is actually close to the freezing point there is no harm to the larva. Indeed the grafted larva is in more danger on a very hot day than on a cold day. I did not always believe this, but one has to change his mind once in a while if he is a beekeeper.

I am perfectly aware that some of my statements will be disputed warmly, but I am not speaking with only a little of experience. I am very nearly through my 51st year with the bees, and all that time I have made them a study. I did not keep bees merely for their honey, I kept them for at least a two-fold purpose. My interest in them is still very keen, and it is due to the fact that there is always something new to find out, or some old fallacy to put away.

There are more of these old fallacies than many of you believe, for most of you, like the average beekeeper, loves to think that certain things about bees are so. It is not so much a question whether they really are so as it is a question of what we like to believe of bees. Maeterlinck wrote a masterly book on the bee, masterly from a language point of view. From a point of view which bears on accurate bee-knowledge the book is a flop. Maeterlinck wanted to believe that bees did this and did that. He wanted it so much that he became blind to what the bees actually did. I make these statements advisedly.

No, long ago I gave up that desire to believe that bees did this or that because I liked to think they did. Close study of the bee revealed the truth and forced me to deny certain things. So it is with queen-breeding. Let every breeder believe what he wishes. It will not affect the truth. All honor to him, if he breeds good queens whatever his belief.

It is very essential while grafting to allow only the briefest of exposure to a grafted larva, and to get the grafting done as speedily as possible. Only a slight drying from a brief exposure is enough to prevent a larva from ever becoming a good queen. I learned several years back the great importance of

keeping all grafted larvae protected by a damp cloth. When I get ready to graft a frame of three or four bars I have two cloths almost wringing wet and one of those cloths is always over most of the cups while the second is slightly folded to expose a minimum of cups.

After the cups are given to the colony they are not as a rule disturbed for three or four days. The colony is fed very thin syrup for three days and possibly four. At that time all good cups will be sealed, and further feeding is not needed. At this time the cups are briefly examined with great care to see that all is well.

At the 10th day the cups are removed and given to baby nuclei. My baby nuclei are simply small boxes with a bit of comb, some food and about 300 bees. These bees are the bees which produced the cells. The little boxes are kept closed for two days and then set out late the second day after stocking. The tenth day from the time the cells were removed, 99 per cent. of the queens are ready to mail, that is if weather conditions have been good. In my experience few queens fail to mate when six days from the cell provided weather permits.

Now a few words about a good queen. How shall we know her? In an earlier paragraph I practically answered this, but will go into a few details.

A queen shows her quality very early by the method she deposits her eggs. If she holds to one place on the comb and goes round and round until she has a space the size of the palm of your hand stocked with eggs and not an empty cell missed, that queen, ten to one, is a good one. But if she lays half a dozen eggs here and half a dozen there, there are grave doubts about the excellence of that queen. She may turn out later to be excellent, but she gets away to a bad start.

Later if one finds solid sealed brood in two or three frames with unsealed on either side, and eggs in combs further out, such a queen shows promise.

I am speaking of young queens. Of course, the actual value of a queen is determined later by what her progeny will do. However, the chances that later results will be satisfactory are usually foretold by the early behaviour of the queen.

All of us breeders would like to send out good queens. It is impossible at times. Under pressure of orders and under adverse conditions it takes an honest man to send back money and say, "My queens just now are not up to par." There are few breeders I believe that would not prefer that every queen he sends out to be a humdinger.

That makes me think. I once had a customer who bought queens from me for three years, praising them highly, then he stopped buying, saying my queens were no good. The fact was that he got queens from a breeder of unusual excellence, and though the queens I sent later were really good, they did not come up to what he had had before. So I raise the question—Does it pay to send out queens of too high an excellence?

CARBOLIC ACID FOR REMOVING SUPERS

By Enos H. Hess, Mechanicsburg, Pa.

Bees do not like the odor of carbolic acid and try to get away from it. A fifty per cent. solution of the fine crystalized acid should be used. Zonite, a chlorine preparation is said to give the same results.

The way to use the repellent is to make a light frame the size of the hive, or use an inner cover, tacking two or three thicknesses of cheese cloth or cotton flannel on one side of the frame or cover. The liquid is sprinkled on the cloth and placed on the super or hive body to be rid of bees. It is best to place one-fourth or one-half inch blocks between main hive body and super or hive body to be rid of bees or the super may be taken off the hive and placed on an inverted hive cover, into which the bees will go as they are driven out of the super by the odor of the carbolic acid. The cover can be jarred in front of hive to rid it of bees.

The carbolized cloth frame should be removed from the super as soon as most of the bees are driven out, as the honey will absorb some of the odor if left too long in contact with it.

The method is servicable when supers are to be removed from hives in an cut apiary on one trip. The bee escape board method of ridding supers of bees is, in my judgment, to be preferred in most cases.

DISCUSSION

Zonite was used by one of the members with great success, in spite of the fact that it is a chlorine solution, and not a carbolic solution. He moistened wadding with water, and sprinkled with zonite, full strength. It never leaves a taste.

One member claimed that any time he had tasted honey which had been treated with carbolic acid, he had noticed a decidedly unpleasant taste. Yet Mr. Hess and others have never been troubled with tainted honey after using carbolic acid.

(As Mr. Hess states in his article the carbolic acid will flavor the honey if left on too long, this would be serious—Editor). Always use chemically pure carbolic acid and no harm will result.—H. W. B.

DEMONSTRATION ON FUMIGATING COMB HONEY FOR WAX MOTH

A. T. Keil, Apiarist, Treesdale Farms, Inc., Mars, Pa.

In taking Comb Honey Supers from the hives, I like to take the sections out of the supers as soon as possible, in order to keep wax moths from laying eggs, especially the lesser wax moth. If any sections are not filled out and capped, and not badly soiled, either use them for bait sections or put in a super and place back on the hive for the bees to fill out, providing nectar is still coming in from the field. I generally quit trying to get comb honey before the honey flow slacks up too much at end of season.

The bottoms of finished sections are roughly scraped if I am very busy, if not extra busy, they are completely cleaned, and placed in cardboard cartons of twenty-four to the case. On the tops of these sections I scatter a pinch (about a level teaspoonful) of Di-Chloricide, leaving as much stay on the tops of sections as possible, as the vapor is heavier than air. I then place a newspaper (or wrapping paper) completely covering the top, turn in cardboard top coverings and seal across the top with gummed tape, and set in a house or anywhere where the temperature does not get too cold, about 70 degrees F. or warmer, and where it is not damp.

This odor is not objectionable, in fact I like it if not too strong, and the vapor is not harmful to human beings or domestic animals.

The length of time that this treatment will last of course depends on whether the comb honey boxes are moth proof. I usually check up on some of the cases of honey about October 1st to see how they are. Nearly every week I clean and cellophane some for our markets, so I keep a good check on what I can expect in the other cases. So far I have not had any reoccurrences, even if I did not get some combs treated until the wax moth had started.

Di-Chloricide (Trade Mark of Merck & Co.) is Paradichlorbenzene put out especially for moths and carpet beetles, etc. and while Paradichlorbenzene is used for Peach Tree Borers, yet in my opinion Di-Chloricide is a more refined product, smaller crystals, leaving no odor or stain in clothing or honey after it has all evaporated, and quickly disappears in open air.

Carbon Disulphide (also called Gin Flea) is usually used for fumigating for the wax moth, but there is danger of getting it near fire as it is highly inflammable. It has an offensive poisonous vapor. I use it to keep wax moths out of dry drawn comb supers, and frames of honey which later will be extracted or kept for winter stores. Although no doubt could use Di-Chloricide

if about 4 oz. is used for every 5 cubic feet of super space. I have always figured it would be more expensive, expect to experiment and find out.

A beekeeper reported using Paradichlorobenzene and that it left an odor in the honey. Mr. Keil explained he would not use the commercial grade put out cheaply for peach tree borers, but that carrying the Trade Mark "Di-Chloricide" which he has used for years. He would not treat the comb and sell them for at least ten days, and during the ten days keep the honey in a dry, warm room not cooler than 70 degrees F. If the crystals evaporate too slowly the gas may leak out and not be strong enough to kill the moth, larvae and eggs. In cleaning the sections in a warm room, open air after treatment, would soon thoroughly do away with the odor or taste.

Question was asked about some of these crystals getting in a cell and thus not evaporating and leaving a taste, Mr. Keil advised as this was sprinkled on top of the sections, let fall through what may, he could not see how any could get into empty or uncapped cells with honey, unless the case was tipped upside down, etc., and he never had any trouble.

(A number of beekeepers have used para-dichlorobenzene for fumigating sections and have found that it left an undesirable flavor in the honey. This would cause a serious drop in honey sales. Editor)

The American Honey Institute
By Charles A. Reese, In Charge of Apiary Inspection,
Columbus, Ohio.

The Marketing of Honey
By C. H. Kohler, York, Pa.

Remarks from our West Virginia Member,
Jerry C. Frazer, Mgr. Dadant & Co., Wheeling, W. Va.

THE AMERICAN HONEY INSTITUTE

By Chas. A. Reese, State Apiarist, Columbus, Ohio

In order to clarify some misunderstandings among many individuals, let it be stated there are two national beekeepers organizations, namely the American Honey Producers' League, and the American Honey Institute. The League is an organization whose primary purpose is protective and legislative. The sole purpose of the Institute is to advertise and popularize honey. It was organized by the interests of closely allied industries.

Since its inception seven years ago, there have been some remarkable strides made in popularizing honey. Contacts have been established through the enthusiastic efforts of Mrs. Malitta Jensen (known by many as Miss Fisher) which have been responsible for securing tremendous amounts of free advertising not only in magazines, daily papers, but through the medium of the radio. As an illustration, in November during National Honey Week, several programs were relayed over the National networks sponsored by large corporations, who devoted the major portion of their allotted time to the various and sundry uses of honey. Hardly a day passes but what some mention is made by some baking companies relative to the merits of honey, as used in some of their products. The popular Joe Penner program, broadcast on Sunday evenings, known as the Bakers Program sponsored by Standard Brands, Inc., feature quite frequently honey topped coffee cake as a baker's special the following week. A communication of recent date gave the information that this product will be featured on the Baker's Broadcast on February 3d and April 28th, and additional publicity will be included in the making up of their fall and winter schedules. These are just a few specific instances of publicity attained through the efforts of the Institute. Beekeepers need not sharpen their wits to see the utmost impossibility of securing such publicity if they were called upon to assume the financial obligation of sponsoring such programs.

The Institute has succeeded in securing a large number of manufacturing concerns to use honey in the production of their respective products. Among those products are such common articles as candy, cosmetics, cough syrup, and in meat packing, particularly the curing of hams. The latter has the appearance of becoming a tremendous outlet of honey.

In the annual report of the secretary, it is stated that the demands for recipes to be used in demonstration work of the coking school lecturers, home demonstration agents, domestic science teachers, and housewives, has reached such a point where the distribution of such materials has reached into the millions. In addition, there is on file in the office of the Institute printed evidence showing there were hundreds of magazines and newspapers which carried stories and articles referring to honey. These publications are in groups going directly to the housewives, bakers, stewards of hotels and restaurants, dietitians of hospitals, trade executives, teachers of nutrition, nature study, and general agriculture. Incidentally, all information disseminating from the Institute carries the seal of approval of the American Medical Association. In fact, this factor was one of the major accomplishments of 1934. The annual report of the Institute will soon be released and copies may be obtained by sending six cents to the American Honey Institute, Madison, Wisconsin.

Quite frequently this question is asked: "What do I obtain from my membership subscription to the Honey Institute?" Naturally when investing the amount of your subscription, this is done with the idea of securing a fair return for the same. Advertising experts have estimated for every dollar invested, you realized a return of \$40.00 to \$50.00 in honey publicity. By continued publicity, it is certain the consumption of honey will increase and certainly with increased consumption, beekeeping will become more profitable. The amounts of honey consumed by the general public depends entirely upon the budget of the Institute and the interest shown by the beekeepers not only of Pennsylvania but of the entire United States. As it is at present, the Institute is finding it difficult to take care of the increasing numbers of requests for information from home makers, schools and hundreds of other sources. Unless these demands are met promptly much of the desired results will be lost.

At the annual meeting at Valdosta, a plan to make a five year pledge plan a permanent part of the Institute financial program was worked out. During the year pledge cards will be distributed to beekeepers throughout the United States, with the hope the beekeepers will signify their willingness to pledge definite sums for a five year period. During the year 1934, the Institute increased in membership from less than 350 to approximately 1000. If all these memberships were to provide five year pledges, the finance committee would find it much easier to build a budget to provide for necessary advertising and give its members more efficient service.

The Board of Directors at the annual meeting of the American Honey Institute voted to establish a Permanent Endowment Fund, and \$100 has been set aside as a beginning. Any person may become a life member upon payment of \$25.00 to the Permanent Endowment Fund. In normal times, the interest from this sum should amount to at least \$1.00 per year, and would entitle each life member to all membership privileges. All sums paid to the Permanent Endowment Fund will be invested with a reliable trust company, and only the income will be used for the current operation of the Institute. Any beekeeper may set aside a definite sum to be paid to the Institute Endowment Fund from his estate with the knowledge that the money will be permanently protected, and, except in the event of some inadvertable national catastrophe, will remain forever a memorial to the donor.

The Institute has passed through the crisis, and with good management will last indefinitely. An annual honey publicity campaign valued at \$250,000 to \$300,000 is now in operation. However, it has reached the point where it must either advance or remain at its present level. This level can be maintained for some time, but unless more money is secured, all that has been ac-

complished will soon be of little value. New Publicity and contacts must be made.

Records for 1934 show that it was a remarkable year—remarkable because in a time of real distress the industry provided the Institute a \$6,000 budget. This is an indication that with the cooperation of the leaders and beekeepers in every state, and with constructive planning on the part of administrative officers of the Institute, a much larger operating budget can be provided.

The Honey production of every state has been studied from the figures compiled by the Bureau of Agricultural Economics at Washington. For the purpose of presentation, let us set up a permanent state quota on these averages. On a tonnage basis, at ten cents per ton, California beekeepers should contribute approximately \$750.00, Minnesota \$700.00, Ohio \$500.00. Pennsylvania, which has an average production of 1,542 tons, should have a permanent State Quota of \$160.00. This would be a fair basis on which to estimate the Institute's possible income, though we do not presume that all states would be able to fulfill their quotas each year.

It is the sincere hope that you, as individuals as well as an organization, will assume the responsibility of supporting the Institute to the fullest extent, and when the returns for 1935 are tabulated, that the Pennsylvania beekeepers will have more than exceeded their quota.

Mr. Keil announced that our association had received an invitation to attend, and he attended, the Annual Meeting of the State Council of Agricultural Associations of Penna., Room "D" Farm Show Bldg., at 1:30 P. M., January 21st, 1935. Most of the meeting was taken up with passing on resolutions that a Committee had prepared, and as our Beekeepers' Association evidently never had a representative present, nothing was said about more inspection of bees and appropriations for experimental work at State College, etc. of bees.

It was decided that membership fees would be \$2.00 to \$5.00 a year, and Keil recommended our joining.

On the subject of Roads, they decided that it would be better and more economical to have the State take over and operate all roads thus saving duplication costs, etc.

Regarding Schools it was thought best for the State to collect School Taxes and pay teachers wages, etc. so no thinly populated districts would suffer for funds to pay expenses.

Rural electrification and other subjects talked over and recommendations as an association will be made to proper parties.

SPRING MANAGEMENT

By E. J. Anderson, Extension Apiarist, State College, Pa.

Mr. Keil announced that if the Resolution Committee would get our resolution ready by 10 o'clock tomorrow morning, regarding more appropriations for inspection work next year, the Horticultural Society will include it with theirs. If this Society is back of us, we are surer to accomplish our purpose. Of course, it is to their advantage, too that we receive a generous appropriation, as their crop depends very largely on pollination by bees.

BANQUET: Jackson's Domestic Science Kitchen, 206 Walnut Street, near Post Office, Harrisburg.

Beekeeping In The South—E. J. Anderson, illustrated with strip films. Lighting facilities did not permit the use of the films during the day as originally planned.

QUESTIONS ASKED MR. LATHAM

What is the correct age of the larvae when grafting?

Any time from the time it hatches until a little over two days old. It is not necessary to have Royal Jelly in grafting. I have had success with dry grafting. It takes twice as long, and twice as many larvae. Put a drop the size of the head of an ordinary pin (when jelly is used) in the bottom of a cell—just enough to enable you to slide off the larvae from the grafting stick.

One time I used larvae 1 1-2 to 2 days old for one batch and another batch about two hours old. The young ones gave dark queens, and the old ones gave yellow. If chilled, a queen will become dark.

Question of acclimatization.

There is nothing in it, I believe, though of course, it is true that some bees winter better than others.

Mr. Latham:

I used to keep hives on Cape Cod, near Provincetown. One hive in a dell out of sight of all houses was robbed one winter. These hives were let-alone-hives, and I did not see them from late in August till early July of the next year. Most of the honey was gathered from seashore golden rod. Hence the crop was largely in the hive all winter. The thief took about 60 pounds I judged. That summer I nailed strips of board about the hive to protect it. No use. The strips were torn off. The next year I fastened a strong chain around the hive. Again no use, the chain was broken. For three years now that thief had stolen the honey from that hive.

That late summer I took away most of the bees and the queen with all the brood, leaving one comb with some honey so that a few bees would be seen about the hive. I placed in the back of the hive 100 lbs. of sand in a sack. I then nailed cover on with two pounds of 12 penny nails.

I wish I could have been in the bushes to see what happened. The thief could not get the cover off, but did dig his way through a triple-walled hive to find the heavy lot of honey (?).

The honey butter which I make ("Every Drop a Delight") and which you are using tonight is made of pure granulated honey. It must be very smooth. It cannot be sandy. But it does not have to be made from fresh honey. Heat up the honey and kill the yeast in it (135 to 160 degrees—shame on you? necessary to kill yeast).

There are many kinds of honey, and the different kinds must be blended if you expect to have a honey butter that will suit the taste of everyone. Often a certain kind of honey will be violently disagreeable to one person.

In making the honey butter, I fill a barrel with blended honey, and with some honey butter which is already made. Not much stirring is necessary, but I go to it morning and night, and with a big paddle, keep moving it to change the position of the honey and in this way I keep the fine grain, and break up crystals which might have formed. The temperature should be quite cold—around 57 to 60 degrees. I make it in the winter, beginning about October.

The ordinary package of bees is far from being ideal. Yet the ideal package, the kind that I have sent out different times, and am convinced is dependable—is too expensive. In three-pound packages I put tested queens under a year old with their own bees—all young bees. There is no supersedure. However, these are \$8.00 apiece.

BANQUET—INTERESTING EXPERIENCES

Harry B. Kirk, Harrisburg, Pa.

I had an experience this summer which Mr. Reese's remarks called to my mind; I started out one day last season to reinspect an apiary in the mountainous sections of Somerset County. A notice had been sent in the spring to the owner of these bees stating that the bees in the box hives on his premises were to be transferred to modern movable frame hives or he would be liable to prosecution. When I approached the house I was informed by his son (a good sized tough-looking boy) that his father was out in the woods somewhere. I offered the boy a half dollar to direct me to the whereabouts of his father. As we were about to start out the boy said, "Hey, Mister, how about that half dollar you offered me?" "Oh, I said, I will give that to you when we get back." "Nothing doing," said the boy, "I'll take that half dollar now 'cause you ain't gonna get back."

CUMBERLAND COUNTY BEEKEEPERS ASSOCIATION

The regular annual meeting of the Association was held on Feb. 15, in cooperation with our County Agent. At this meeting the Association voted to join the State Association and at the same time nine of the County Group were secured for the State Association, two other members having paid their dues direct in January. The dues for both Associations amount to \$1.00.

At this meeting the following officers were elected:

Rev. H. M. Snively, President, Carlisle, Pa.
Raymond Fisher, Vice-President, Carlisle, Pa.
P. M. Beam, Secretary-Treasurer, Carlisle, Pa.

LEHIGH VALLEY BEEKEEPERS ASSOCIATION

The Fourteenth Annual Meeting of the Lehigh Valley Beekeepers Association was held on January 9th at the home of the Secretary, reports were read and approved, election of officers was held and are as follows:

President, Thomas A. Berkey, 1319 Butler St., Easton, Pa.
Vice-President, Allen C. Trainer, Schnecksville, Pa.

Sec'y-Treas., Mr. and Mrs. H. W. Dennis, 1015 Maple St., Allentown, Pa.

Plans were made for a display of Apiary products at the Penna. State Farm Show held Jan. 21st to 25th, inclusive.

Eleven members of our Association are affiliated with the Penna. State Association and more expected to do likewise.

A committee was appointed to make arrangements for the Annual Banquet with the Fruit Growers. After an interesting business session the meeting was adjourned.

We appreciate the cooperation of every member who helped to make 1934 another successful year.

Mrs. H. W. Dennis, Secretary

REVIEW OF THE SEASON

The winter losses have been very small to date, most of the colonies that have died so far have died from starvation. A few colonies have smothered because the entrances of the hives became clogged with dead bees and a few have died because of dysentery. The total loss, however, will be less than half that of the preceding winter.

Extracted honey has been selling rapidly this year in most sections of the State. The advertising of extracted honey for cooking, to use for sweetening

cereals, and for spreads has increased the demand for this type of honey at the expense of comb honey. Comb honey on the other hand has been selling slower and the large crop harvested last summer as compared to the year before has made the comb honey market appear exceptionally quiet. Many beekeepers are preparing to produce more extracted and less comb honey this year. This trend is undoubtedly justified providing the change is not too rapid. There will continue to be a demand for comb honey and even though the demand has appeared to be decidedly limited, there may be some improvement in the demand for this type of honey another year. It would not be advisable to change entirely from the production of comb to extracted honey, but make the change slowly and watch the market trends from year to year.

Honey has been advertised extensively as an ingredient of different brands of bread especially the Honey Crushed Whole Wheat Bread. This type of advertising should help the sale of honey also.

A FEW REMARKS FROM OUR SEC'Y-TREAS.

It is gratifying to see the renewed interest in Beekeeping. Our Association, last year, more than doubled the previous year memberships and, from present indications, we will double last year's memberships. It is my opinion that if that bothersome AFB could all be burned up in one year and kept down to none or more than five cases a year per county, Beekeeping would soon be flourishing.

Your President, E. J. Anderson, appointed A. T. Keil, Allen C. Trainer, Floyd H. Sandt, Frederick Hahman and C. H. Kohler as a committee to call on Sec'y of Agr. Mr. J. Hansell French for more inspection. They called on him March 12th, Messrs. Trainer and Sandt secured Senator Geo. A. Rupp, of Allentown, and Mr. C. T. Woodring, Lawyer and Beekeeper, of Easton, Pa., to be with us and, with Mr. Harry B. Kirk, Mr. Bell and Mr. Hargar, we had a fine visit with the Secretary of Agriculture.

After hearing what each member thought of the necessity of more inspection, they hoping that all counties could be inspected thoroughly this summer, Secretary of Agriculture advised he was convinced of the necessity of inspection, and would try to have about as much appropriations as were available last year, but could see no way of securing more money. The question of taxing colonies of bees inspected was not thought practicable to raise more money. Neither was it thought good policy for the larger beekeepers to inspect his neighbors bees and thus probably cause neighborly hard feelings.

In suggesting the passing of proper Legislation so County Commissioners could appropriate \$200 to \$500 or more according to necessity to help on inspection in their County, I had in mind a system similar to that now in Ohio, have a County beekeeper do the inspection, one that no doubt would be on the job year after year, and not have to spend half of his time hunting the beekeepers every year. The first year probably taking six weeks to cover the County thorough and no doubt thereafter go over half the County each year, thereby covering the reinspection every other year. There are a lot of details to be worked out, such as the Inspector working under the supervision and authority of the State Apiarist. This was thought to be the only solution available now, and proper addition to our Bee Laws is now being worked out.

Appropriations for Bee Research at State College was looked into and a bill will soon be up for Legislature to act on and all Associations and some beekeepers from each County will be notified, and if they will call on their Senator and Representative urging them to vote for it, no doubt we will get it passed and get started on this worthy cause.

Do you know that Pennsylvania in 1933 ranked 9th among all states in total cash income from farm products sold, but 23d in state appropriations for the support of agricultural research? New York State with appropriations of \$1,495,000, Pennsylvania \$134,000.

Bee Insurance—Belonging to County and State Beekeepers Associations, in my opinion, is the best kind of insurance, whether you have a thousand or

only one colony, if your one colony gets AFB you know what the cost will be to cure or replace it, your Association Publishing Committee and Officers are putting in much time, expense and effort for the betterment of beekeeping in general, are you willing to put a little effort in and get your neighbor to join? How about re-organizing or starting a Beekeepers Association in your County? If you show an interest I know your County Agent will be glad to help you.
Slogan—Every Member Get Another Member.

BRADFORD COUNTY NOTES

By Harry W. Beaver

Winter has slipped by and spring is looming in the near future. The elms and soft maples are budding even in Bradford County. I find that the bees have wintered well, not having found a dead one in the several apiaries visited. The colonies seem strong and, as far as I could ascertain, have used less stores than usual. This, however, is not a guarantee of a bumper honey crop. The late Mr. W. L. Cogshall frequently would say that, when bees wintered unusually well, look out for a scant crop of honey. When bees died in winter, he bought bees right and left for then he would predict a heavy honey flow. He was always about right. The inference being that a hard, cold winter did something to the soil to make plants yield honey. Be that as it may, we hope to get a bountiful yield from clover this year. Clover looks well. We have not had a clover yield here in this county since 1931, and by the law of averages, we have a clover crop due us.

By a lucky chance, we were able to take the family and spend two months in the sunny south. We hiked off for Texas as we had never been in that section and had an itch to see some of it. Well, they do things in a big way down there, big cotton fields, big citrus groves, big vegetable fields, cabbage, tomatoes, carrots, beets, broccoli, and, last but not least, our old friend, spinach. Hundreds and hundreds of acres of everything as far as the eye can see in a level country. Also bees, some well kept and, it seemed, more not kept at all.

There is no A. F. B. in Texas for the simple reason that when a colony dies in Texas, the bee moth larvae have the combs all eaten up before the week is out. As about all that there is to kill a colony is starvation, there is no danger from robbing infected honey, so there you are—a beekeepers paradise??? But you should hear the stories from the beemen themselves—stories of crops from 200 pounds average per colony down to nothing, all in the same state but in locations hundreds of miles apart. The Rio Grande Valley seemed to be the garden spot of Texas also the best location for bees and honey. The fly in the ointment there is that the bee territory is being narrowed down as the land is being cleared up for citrus and vegetable farming. Most of the honey is gathered from wild plants such as mesquite, juajilla, white brush, ebony, agarita, etc. Certain of these plants yield in a dry season and others will not yield if it is not wet. In the irrigated sections considerable citrus honey is secured but weeds grow so thick and fast that all honey in this section is mixed more or less with this rank-tasting honey. In some sections cotton yields abundantly while in other sections it does not yield at all. Bees are poisoned from spraying cotton for boll weevil at times, so there is trouble more or less where ever one sets down his hives. Several Minnesota men are buying bees in Texas and intend to raise bees and truck their packages north this month to replenish their hives in the north, a long trek, what?

Over the most of the south the average crop is rather small and the season being almost a year round proposition, the work is more in proportion than it is here in the north, if the work were done, which it did not seem to be in a great many apiaries. I could not help noticing the note of disappointment in E. R. Root's "So this is Florida" article in "Gleanings." But we, having been in Florida before, were not as greatly disappointed, having seen the burnt-over areas and the smoke and fire on all sides till there seemed to be not a bit of bee forage left. Still and all if there were no drawbacks, what would we do with all the honey?

WRITE TO STATE ASSOCIATION SECRETARY ABOUT SPECIAL SUBSCRIPTION OFFER TO GLEANINGS IN BEE CULTURE.



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Reynoldsville Hardware Company,
Reynoldsville, Pennsylvania.
A. I. Root Company of Philadelphia,
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10th and Market Sts.,
Harrisburg, Pennsylvania.
The A. I. Root Company,
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F. E. Burgess,
642 Elm Road N. E.,
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CONNELLSVILLE, The Loucks Hard-
ware Co.
DANVILLE—Welliver's Hardware.
DOYLESTOWN—Dr. Geo. T. Hay-
man.
EBENSBURG—Edwards Hdwe. Co.
EMAUS—Chas. D. Ruth, 442 Ridge St.
EPHRATA—I. G. Sprecher & Sons,
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ERIE—The Thielman Seed Co., 1601-
1605 State St.
EVERETT—H. L. Bennett.
FRANKLIN—Franklin Furniture Co.,
Cor. 13th and Buffalo Sts.
FREDONIA—G. A. Freyermuth & Son.
GREENVILLE—J. W. Nelson, 64 Clin-
ton St.

GROVE CITY—Ramsey Bros. Hard-
ware, 117 S. Broad St.
HANOVER—J. W. Hoffacker, R. F. D. 2
HUBLERSBURG—Max Miller, Box 14.
HOLLIDAYSBURG—Diamond Hard-
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HUNTINGDON—Corcelius Hdwe. Co.
LATROBE—P. H. Saxman, R. 2, Box
227.
LAURYS STA.—Leslie J. Peters.
LEWISTON—Geo. W. Sheary, Sr., 38
Valley St.
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Dept. M.
MIDDLETOWN—W. G. Lauver.
MILDRED—A. J. Exley, Sunnyside
Apiaries & Poultry Yards.
NEW ENTERPRISE—C. O. Brum-
baugh.
NEW HOLLAND—Harry W. Martin,
Route 3, Box 5.
NORRISTOWN—Chas. F. Hoser, Rt. 4
NORTHUMBERLAND—Andrews
Hardware Co.
PERKASIE—H. F. & C. A. Loux
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SCHUYLKILL HAVEN—D. C. Gilham.
SCOTTDAL—The Loucks Hdwe Co.
SHAMOKIN—W. C. Hack & Son.
SOMERSET—Schell Hardware Co.,
Dept. 11.
SUNBURY—Sunbury Hdwe. Co.
TRYONVILLE—J. J. Sterling.
TUNKHANNOCK—Gay-Murray Co.,
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WILKES-BARRE—Chas. F. Coombs,
Box 42.
YORK—C. H. Kohler, 542 W. King St.
YORK—C. C. Craver, 644 Market St.
YORK SPRINGS—Orpheus Diller.

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THE PENNSYLVANIA BEEKEEPER



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Pennsylvania State Beekeepers' Picnic and Field Day

At Rocky Springs Park, about one-half mile east of Lancaster just off the Lincoln Highway. The program will begin at 10:30 A. M. Standard Time, August 22d. Watch for the signs on the Lincoln Highway just east of Lancaster. They will direct you to the picnic grounds.

The program is as follows:

10:30-11:00 A. M.—Informal discussion and questions.

11:00-11:30 A. M.—Demonstration on wrapping and packing sections of comb honey. Plans are also under way to get a bee tree to transfer into a modern hive.

11:30-11:45 A. M.—Demonstration—electric embedding.

11:45-12:00—Beekeeping in the South, by Harry Beaver, Troy, Penna, owner of 1000 colonies of bees.

12:00-1:00 P. M.—Basket picnic. Bring your basket.

1:00-1:30 P. M.—Group photographs.

1:30-1:45 P. M.—Address of Welcome, Charles Hess, President of Lancaster County Association.

1:45-2:00 P. M.—Bottling Honey for Store Trade by Enos Hess, Mechanicsburg, Pa.

2:00-2:15 P. M.—Experiences with Package Bees, Mr. H. M. Snaveley, Carlisle, Pa.

2:15-2:30 P. M.—Apiary Inspection, H. B. Kirk, Assistant Entomologist in charge of Apiary Inspection.

2:30-2:45 P. M.—Activities of the York County Association, Charles Kohler, York, Pa.

2:45-3:00 P. M.—Gains in Weight for a Hive on Scales, Francis Jones, York, Pa.

3:00-3:20 P. M.—Smoker Contest. Bring your bee smoker and your best fuel.

3:20—Other games and prizes.

This picnic offers something different for the beekeepers attending since it is being held at a commercial park which has the usual attractions that go with a park of that kind. A section of the grounds will be reserved for the beekeepers so they can enjoy their program without interference. A pleasant time should be enjoyed by all who attend. Come and meet your beekeeping friends. Everybody is invited.

A FEW REMARKS FROM SECRETARY-TREASURER

I have never seen as much White (Little Dutch) and Alsike Clovers in this section as there is this year, the abundance of rain has about covered all fields with bloom. The bees started with apple blossom, then wild crabapple, locust, berries and now the clovers. Yellow and white sweet clovers are in full bloom now, (June 22d) and until the excessive rain started a week ago, bees were bringing in honey in fine shape. Some hives had one and two extracting supers ready to take off. Have not been able to see what they did in the last week, between showers.

By the time this issue of Penna. Beekeeper reaches you, no doubt I will have written to all County Beekeeper Associations and where there is no Association, to a beekeeper whom I figured would be willing to put in some time to help get their county cleaned of AFB, together with a suggested form of petition to the County Commissioners. This Form of Petition was written up by Mr. Carleton T. Woodring, Attorney At Law, Drake Bldg., Easton, Pa. Mr. Woodring, being a beekeeper, is much interested in having this Act put through and signed and with Senator George A. Rupp, of Allentown, and others were instrumental in getting the amendment through.

Some County Commissioners may have made up their budgets for this year, but I believe if we beekeepers and fruit growers explain the seriousness of AFB and the emergency of getting it cleaned up at once, believe they can find the money if they are convinced of the necessity. Failing to get appropriations now, be on the job when yearly appropriations are again made up.

AN ACT

To amend section four hundred and forty-six by authorizing counties to appropriate money for purpose of controlling and suppressing diseases to honeybees.

Section 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met and it is hereby enacted by the authority of the same That section four hundred and forty-six of the act approved the second day of May one thousand nine hundred and twenty-nine (Pamphlet Laws one thousand two hundred seventy-eight) entitled "An act relating to counties of the second third fourth fifth sixth seventh and eighth classes and revising amending and consolidating the laws relating thereto" is hereby amended to read as follows:

Section 446 Suppression of Animal and Plant Diseases. The board of county commissioners is hereby authorized to appropriate money from county funds for the purpose of controlling and suppressing dangerous infectious disease of livestock and poultry and dangerous plant diseases and insect pests and diseases to honeybees in cooperation with the Department of Agriculture of Pennsylvania

For the purpose of carrying out the provisions of this section the board of county commissioners may enter into agreements with the Pennsylvania Department of Agriculture concerning terms, rules, regulations and practices for conducting the work.

Section 2. The provisions of this act shall become effective immediately upon final enactment.

Honorable Wilson G. Sarig, Speaker of the House of Representatives

Honorable John G. Homsher, President pro tempore of the Senate.

Approved—The 22nd Day of May, A. D. 1935.

Suggested Form of Petition to County Commissioners

We, the undersigned, Citizens of the County of.....State of Pennsylvania.

RESPECTFULLY REPRESENT AS FOLLOWS:

1. That in the said County there are more than.....hundred citizens engaged in bee keeping.
2. That in the said County there are more thanthousand colonies of bees.
3. That the annual honey production within the said County exceedsTons and has an average wholesale value of.....Thousand Dollars. (\$).

4. That in the said County the value of the annual apple and peach crops exceeds.....Thousand Dollars (\$000).

5. That the fruit crops aforesaid are increased annually at least twenty per cent. by honey bees pollination, or..... (\$000) per year.

6. That the bee keeping industry in the County of.....is an important one in itself, and in its relation to orcharding and other branches of agriculture.

7. That certain dangerous and infectious diseases threaten the continuation of bee keeping in this County.

8. That the Commonwealth of Pennsylvania has recognized the foregoing, and for upwards of fifteen years has made annual appropriations of approximately Six Thousand Dollars (\$6,000.00) for inspection work in and about the control and suppression of bee diseases.

9. That said appropriation by the Commonwealth is inadequate to properly control bee disease in the Commonwealth of Pennsylvania and the County of.....

10. That the legislature of the Commonwealth of Pennsylvania has recognized the foregoing and has, May 22d, 1935, Amended section four hundred and forty-six (446) approved May 2, 1929 (Pamphlet Laws one thousand two hundred seventy-eight) authorizing the Board of County Commissioners to appropriate money from County funds for the purpose of controlling and suppressing, inter alia, diseases of honey bees.

WHEREFORE, your petitioners pray your Honorable Board to appropriate from County funds a sum of money sufficient to provide for the control and suppression of dangerous and infectious diseases of honey bees, in cooperation with the Department of Agriculture of Pennsylvania.

And they will ever pray, Etc.

The following is the continuation of the minutes of the Winter meeting at Harrisburg:

SWARM CONTROL

By Allen Latham

More than 20 years ago while on a visit to Dr. C. C. Miller at Marengo, Illinois, I asked the grand old man what one trait which bees have would be eradicated if it were in his power. Without moment of hesitation he replied "Swarming." He seemed greatly surprised when I said that my choice would be the gathering of propolis.

Did not understand that I would not rank swarming a good choice, for I realize what a loss every year is entailed by beekeepers through this trait of the honeybee. Swarming, however, never proved the greatest obstacle to me and very early in my work with the bees I began to achieve a fair success in holding down swarming. Today with over 400 colonies I rarely have 15 swarms in a season, yet I must not boast for this coming season may be one of these in which bees seem to go into a frenzy and the beekeeper is kept on the jump every sunny day for weeks.

A few words first regarding the cause of swarming. This hidden mystery has never been solved, though many theories have been brought forth. Many believe that the late Mr. Demuth is right in his theory. I happen to be one who did not take to the Demuth theory and Demuth and I have had arguments over this matter. Congested broodnest. Yes, a congested broodnest almost always precedes swarming. Nevertheless one may have a very congested broodnest and no swarm. On not less than two occasions I have had the desire that a certain colony cast a swarm. To bring the desired result I have resorted to feeding. In each case the colony jammed its broodnest, crowded the queen, grew less in numbers and refused to warm.

No, the real cause of swarming is more than a crowded broodnest. Some ten years ago I sent to one of our periodicals a two-part article on this subject.

The first part was very revolutionary. The editor wrote back to me that he could not print the first part, but would print the second, which he did. It was something like a man fully dressed except that he had no trousers on. Did not get very far. I was rather hot under the collar about that, and later very much so when that same periodical printed an article by a German scientist who brought out some of my very own ideas.

To understand swarming one must ponder over the evolution of the honey-bee. We cannot go back several million years and see how the remote ancestors of the bee lived, but we can study all her cousins and by analogy find a possible truth. I have tried to do that, and I believe that the cause of swarming is what I term "residual sex instinct."

There was a time when the queenbee was without any worker assistants. Later she had a few, and later more. Young queens at that time were tolerant of each other and when the time was ripe they left the nest on mating trips, possibly alone, but possibly attended by a few workers. At any rate, later, probably the nest was practically deserted, the several young queens each getting a few workers to remain with her.

Some of our Ants practically do this. Thousands of female ants leave their nests in August, become mated and as soon as they are on the ground bite their wings off. They may be hundreds of yards from the old nest and cannot find their way back. What happens? merely this. They as newly mated queens are very attractive to worker ants of their kind. Very quickly a few gather about a young queen and become faithful to her and a new home is started. I really believe that our honeybees years and years ago went through that phase.

When later colonies became very populous and large stores of honey sometimes existed, the old home had its attraction. Complete desertion did not take place. Queen rivalry began, and gradually the swarm act as we know it took place. A wonderful bit of evolution worthy the thought and study of every beekeeper.

Now all worker bees when about five days old take what we call a cleansing flight. It is not altogether that, it is partly an urge akin to that of the virgin queen to leave the hive. As soon as these young bees come back they are different individuals. They have not been mated, but their lives become almost as changed as does that of their princess sister when she comes back from a wedding trip. No longer are they brainless, stupid, swollen nursebees. Have you ever thought how little the quiet young bees of a hive have to do with any activity of the hive. They are like so many flies. They resent no intrusion of the hive. They tolerate any queen, they tolerate strange workers.

After their first flight they quickly become transformed. They develop intense patriotism. They quickly become the worst stingers in the hive. They become the guards, they are hostile to any stranger. They rule the hive. I term such bees control bees. It is the presence of such bees in large numbers that brings on the swarm fever. A colony without such bees never gets the swarm fever. If the number of these bees is low compared with old bees and a honey-flow begins, there is no swarming. Such a colony can be carried through the season without any swarm fever. If their number is large compared with old bees, only an expert can prevent that colony from swarming if there is a honey flow on.

These bees are bees that have been thwarted in their natural rights. Robbed as it were of their virginity. They are possessed of an unease which does not belong to young bees nor to old bees. Their restlessness is the whip which rules the beehive.

More than one writer has asked the question, what controls the doings of a hive of bees? One writer wrote a book on the subject with the title—*The Spirit of the Hive*. I have little hesitance in saying that except when the hive is living a humdrum existence its actions are under the sway of these control bees.

If my theory is true then we should be able to control swarming by regulating the percentage of these bees in a colony. Hence our problem becomes—How can we regulate that percentage

It so happens that in my queen-rearing I need multitudes of young bees. I use bushels of them every season. I have nearly a score of out-apiaries with 20 or more hives in each. When I need bees I take my special apparatus along to an out-apiary and bring back from it 10 to 18 pounds of bees mostly running from five to ten days of age. If I find a colony showing any sign of swarm fever I take more bees from that one, while from those that seem deficient in young bees I take few if any. I never rob a colony severely of bees unless it has a bad case of swarm fever.

Now everyone does not need young bees as I do. What can such a one do? This is a problem that anyone of ingenuity can work out. I have worked it out for various conditions. I feel very sure that if I had 50 colonies only, all in one yard, that I could devise a scheme. These young bees do not need to be used for cell building. They can be given to a colony in need of bees. You may not know it, but you can dump such bees right on the top bars of a colony and close up the hive and have almost no bees killed. It is safer to use a little smoke before and after the dumping, and still safer if the top of the frames are sprinkled with thin syrup before the dumping.

These young bees can be kept shut up for several hours and then run into the entrance of any colony, first driving away the guards with a little smoke.

If kept shut up 48 hours these bees can be used to start a nucleus in the same yard and very few return to the parent hive.

In case a colony has swarmed and its combs are but poorly covered with bees, this colony can be given two or three pounds of young bees from a colony coming down with swarm fever, and if all cells are cut, the fever is likely to disappear. A few days later the bees from another colony can be given to this colony without a reappearance of the swarm fever, provided Nature is helping with a good honey flow.

We all know that a good honey flow helps to control swarming, whereas a smattering flow keeps it going. Why is this? Simply that the bee is a one-idea animal. Once get a colony to working well in the supers and there is little danger of swarming. By this shifting of bees one brings about a change of idea, and thus attains control.

My subject is a tremendous one, and I could talk for four hours on it and be guilty of little repetition. I have said practically nothing about manipulation of colonies and supers. Most beekeepers know the elementary teaching along this line. I can assure you that this shifting of control bees supplemented with proper manipulation will go far to control swarming.

Can we control swarming by manipulation alone. I will say yes to this, limiting the control to possibly 90 or 95 p. c. The very best manipulation falls down at times as every expert knows.

About 15 years ago I desired to assure to my single body colonies some honey for winter. I devised what I termed "My safety cover." This in a few words is a shallow body with frames about three inches deep inside measure, and with end and topbars solid. The topbars are not all solid. Two of them have on one side in the middle about half an inch cut out for about 4 inches, these two are placed adjacent so that a bee-escape can be inserted. Hence my safety cover is really a deep inner cover. The bees fill this with honey and it holds 25 pounds or so. I created this purely and simply to hold residual stores for winter. When I came to use it I found it to have no less than five valuable features.

The most important of these features concerns swarm control. It is the finest thing I have ever known in its power to hold down swarming. I have fifty colonies which are not drained of young bees, as I run them for comb honey and wish them to be running over with bees when the flow begins. In spite of the fact that I do not practice taking bees from those 50 hives I have very little swarming from them. I think that three of those 50 swarmed in 1934 though run for comb honey.

One of the most valuable kinks about swarm control lies in the giving of supers at the proper time and especially in not giving too much room at once. Never split a colony by a super until you know it is ready to be split. If you do you will bring on swarm fever or make it still worse. I give first supers over my safety cover. When the colony is ready for more room it goes up through the escape hole and occupies the super. When they are up in good numbers I place this super below the safety cover and add an empty above.

The procedure just outlined can be practiced with the inner cover with much success.

BEE DISEASE ERADICATION

Mr. Chas. A. Reese, State Apiarist, Columbus, Ohio

The subject of bee disease is one of supreme interest to every beekeeper, and one to keep every individual alert if they expect to keep bees profitably. When certain bee disease appear within an apiary, unless immediate action is taken to remove the condition, profitable returns are tremendously reduced.

Certain types of brood diseases have made it necessary to keep bees under closer supervision and has thereby made the individual a better beekeeper. In making this statement, reference is made to European foul brood.

Many beekkeepers depend upon the inspector to do a certain portion of their beekeeping, when it is not difficult to follow directions of prescribed methods of control for certain diseases without reducing their production profits. In the case of American foul brood, the individual who keeps a few bees, giving them no attention, too often is responsible for the greater portion of the American foul brood difficulties within the community. It is the duty of an efficient inspection force to locate such materials and abate the nuisance. In Ohio, we inaugurated a policy of burning all infected materials by the inspector as soon as possible after detecting the same. Since we have a very definite rule in our procedure making it necessary for the inspector to remain in the vicinity of any fires until the material is completely consumed, they possibly do not cover the territory as rapidly as some individuals without experience might desire. However, when the work is properly and methodically done, most instances the disease is completely eradicated. A complete, thorough clean-up is much more efficient and permanent than merely informing the beekeeper he is so unfortunate as to have American Foul Brood in so many colonies and giving him directions to eliminate the same. Too often the instructions are misinterpreted and again the desire to salvage much of the materials does not obtain the desired results, but to the contrary, infects many of the healthy colonies not only within this apiary but the entire community.

In 1929, we asked our Legislature to enact a supplementary section to our apiary inspection law, making it possible for the Boards of County Commissioners to appropriate funds for Apiary inspection, and the appointment of a local inspector to work under the direct supervision of the state apiarist. This provision has been the means of carrying on our program through the years of economic distress when State appropriations were greatly curtailed. Through the Agency of a county beekeepers organization, local horticultural interests and other farm organizations, we succeeded in obtaining funds in amounts ranging from \$100 to \$1,200 in 25 to 30 of the 88 counties each year. The disease condition in areas already covered and abated was not only kept clean, but we succeeded in adding new areas each year. While there are yet some excellent areas conducive to profitable beekeeping to be covered, we have reduced American foul brood to a large extent. The number of diseased colonies has decreased steadily each year for the past five years. When the area clean-up campaign was inaugurated five years ago, approximately 15 p. c. of the bees were found infected with American foul brood. That has declined to the point of 5 1-2 p. c. found this past season. We have some counties in which American foul brood is almost non-existent, where four or five years ago we found as much as 22 p. c. of the bees infected.

In the North Central part of the state there is a territory which is regarded as shipping and producing more honey than any other section of the world.

Four or five years ago American foul brood was the principal topic of discussion at all meetings in this territory. Today, other subjects are in the foreground. In this section of the state, there are quite a number of beekeepers operating from 300 to 1,200 colonies, who have not found a single case of foul brood in the past two or three years. This condition relative to this particular disease certainly speaks for the policy pursued and the whole-hearted cooperation on the part of the beekeepers. When the "clean-up" policy was first inaugurated, we were severely criticized at times for the drastic procedure, however, in localities where thirty to sixty-five percent of the bees were found infected on the first inspection, later disclosed three to five percent infection, a much different attitude was taken on the part of the critics, and today the same individuals who protested to destroying infected materials by fire a few years previously, demand the practice be continued. Even in areas which have not as yet been given a complete inspection, the beekeepers do not hesitate to Cyanogas colonies and burn the same in the prescribed manner. With such assistance and cooperation, we are gradually covering the greater portion of the productive beekeeping areas.

Another interesting factor has entered into the bee disease eradication project, namely the value of the honeybee as pollinating agent to the fruit and leguminous seed industry. Cultural practices have destroyed much of the natural breeding places of the many friendly and beneficial insects. Consequently fruit growers and farmers must depend on the honeybee for sets of fruit and other seeds. Ohio has been recognized as a clover seed, producing state, and many farmers have depended to a large extent on the seed of alsike, red and sweet clover seed as a cash crop. While there has been grown great acreages of alfalfa for many years, it was not until three or four years ago farmers began to realize it was possible to produce seed as well as forage and hay. During the past season, more than 75 carloads of alfalfa seed was produced in Ohio and incidentally, the largest yields were within the vicinity of large concentration of bees. It might be well to mention that agronomists are recommending the variegated varieties of alfalfa as the best types for seeding permanent plantings. These varieties are more floriferous than the common or ordinary alfalfa and yield nectar quite freely. Since these specialized agricultural groups realize the extreme importance of honey bees as a necessity in producing profitable crops and the direct relation of the prevalence of bee diseases in their communities as to their success or failure in their particular endeavor, they lend all possible assistance in securing funds for the suppression of American foul brood within their communities.

Apiaries are usually placed in rather secluded locations, and the relative abundance of bees within a given area is not known by the general public, and the personnel of these groups which make the appropriation for public benefit are not always impressed by requests from beekeepers, but when solicited by specialized groups, they take cognizance of the value of these particular crops and lend their assistance for orchards and fields of clover are easily seen and their worth noted.

There are other areas within the state which are not conducive to beekeeping on a commercial basis, but are of considerable importance in other respects. Cuyahoga County is such an area. Here is found a territory heavily populated due to the concentration of industry. A large portion of the inhabitants are foreign origin and many individuals have acquired bees and keep them in accordance to the practices in their native countries. Within this same area there is a large greenhouse industry devoted to the producing of winter vegetables as well as fruit growing, both of which require bees as pollinating agents. Besides, there are quite a number of individuals who keep a few colonies of bees more for pleasure than profit. At the instigation of the latter, and the horticulturists, a meeting was called by the county agricultural agent to discuss ways and means to combat the foul brood situation then prevalent. Many of those in attendance could speak very few words of English, but signified their desire to have some measure taken to eradicate the malady affecting their bees. The Commissioners were interviewed and an appropriation of \$1,000 was

provided. The first year, over a thousand colonies we found diseased and incidentally not in a single instance did the inspectors find it necessary to call on the local peace officer for assistance. In spite of an adverse season following the clean-up this past year, it was found those interested had not only rehabilitated their losses but added more colonies to their apiaries and the disease situation had been reduced from 66 2-3 p. c. to less than 5 p. c.

This is just another example of what can be accomplished with the cooperation of all groups concerned and a very efficient corps of inspectors provided with the proper legislation permitting the disposal of disease colonies by means of fire.

MARKETING HONEY IN PENNSYLVANIA

Edwin J. Anderson, State College, Pa.

Successful marketing is one of the fundamentals of business that can not be disregarded or slighted by any business enterprise if that particular business is to develop and continue to grow over a period of years. The producer of farm products is at somewhat of a disadvantage in marketing his product as compared to those who manufacture other products or process farm products. The reason is evident since the average manufacturer does business on such a large scale that he can afford to employ help which has specialized in marketing or salesmanship and those employed for this purpose have no other activities to divert their attention away from their marketing program. The producers of honey or other farm products must necessarily spend a large per cent of their time with their bees or on the farm so that the marketing of the produce can be easily neglected or slighted. Salesmanship like any other profession can be developed by careful planning and by practice so that the producer of honey or farm products can acquire a fair degree of efficiency. The producer has one advantage in that he has a more complete knowledge of his product due of his close contact with it and this knowledge is of value if properly used. However, continuous thought and effort must be put into the marketing of a product as well as in its production.

The honey markets of Pennsylvania because of the large population of the State offer many opportunities to the active beekeeper. In fact there are few sections of the country that offer greater possibilities. Many of the opportunities offered are, however, passed by unnoticed probably because in most communities the honey crop has been entirely sold before the next crop is ready to be taken from the bees.

There are sections of the State, however, where conditions are favorable for the production of honey and where the local population is small limiting the amount of honey that can be sold locally. In these communities the marketing program should be developed along different lines. Special emphasis must be given to the production of high quality honey. The comb honey should be graded carefully after it is produced and packed for shipment with each grade in a separate case. It should be packed so that it can be shipped without breakage and arrive safely at the point of destination. The surplus from a number of beekeepers to be offered for sale through one representative so as to attract the larger buyers. The larger buyers are not interested in small quantities of honey or in honey that is not graded principally because the value of sections can not be determined in advance and because considerable time, expense and loss would have to be encountered in handling the honey after it arrived at the distributing plant. Beekeepers in sparsely settled sections of the State must produce a high quality dependable product if they wish to build up a large business and attract the commercial buyer.

It is indeed doubtful if there is any one single solution to the marketing problem but rather success would seem to be the result of persistent efforts along numerous lines. The marketing program conducted should vary according to the community. In the Pittsburgh area very large quantities of honey are shipped in each year from other states. Since this section does not produce much honey and the local population is relatively large, and honey nicely packed sells

readily with only a little effort spent in marketing. According to the Market News Report of the U. S. D. A., 24,400 pounds of honey were shipped into Pittsburgh for the two weeks ending November 15, 1934.

In some of the southern and eastern sections of the State comb honey is produced exclusively while the production of extracted honey has been neglected. The local trade often prefers honey shipped in because a good bit of the extracted honey produced locally is sold in unattractive jars with large unattractive labels. Improvement along this line would help considerably the sale of local extracted honey. The Market News Report of the U. S. D. A. gives 57,295 pounds as the amount of honey shipped into Philadelphia from outside the state during the two weeks ending October 15, 1934.

The greatest problem confronting the beekeeper is that of bringing his product to the attention of his prospective customers sufficiently often to be effective. Honey placed in stores is often put into inconspicuous places where it goes unnoticed and unsold. Honey in roadside markets sells effectively but only a very small per cent of the prospective customers patronize these markets. A house to house canvass or peddling honey reaches many customers but most beekeepers dislike this form of marketing.

Indirect advertising is probably the most effective where for instance honey is given to some social gathering that is putting on a supper, or a talk on bees and honey is given to a biology class in school. Articles in the papers about interesting events in the bee yard or hive help as do exhibits or demonstrations at fairs. The beekeeper should be on watch continuously for an opportunity to advertise honey in this manner.

The stores of the State offer a real opportunity for increased sales of honey through direct advertising. To simply place honey in the stores and leave it to sell as best it can is not sufficient. Considerable advertising must be done if the honey is to move at a satisfactory rate. A glass hive of bees with an attractive exhibit helps to sell a lot of honey. During National Honey Week last fall the Beekeepers Association of Berks County was given assistance by a radio talk and two displays with live bees in local store windows. One of the storekeepers reported that his sales of honey during that week were greater than for any three months of the year. After such a window display the sales continue to remain above the average for a considerable period of time.

A package of bees shipped from the south in April could also be placed in a store for a day or two before it is introduced into the hive. An explanation and a nice display of honey should accompany the package. Recipe leaflets which are free can also be passed out in stores. Demonstrations such as are often conducted by the larger stores help a great deal to increase the sales of honey. A display of the different kinds of extracted honey and an explanation about the variations in honey as produced from different flowers would help materially to dispel that old idea that honey of a different color or flavor is adulterated.

When we look around and see the various efforts by individual beekeepers that meet with unusual success we know that our markets are only poorly developed. Harry Beaver and Walter Doud have recently built serve-yourself markets and sold large quantities of honey through these markets without losing any money. Occasionally a large beekeeper will develop the trade in local stores where little honey had been sold before. This alone would indicate that our markets are not well developed.

Roadside markets offer an outlet for considerable honey especially when the apiary is in view so those passing by will know that the honey is actually produced there. Many patrons of roadside markets are suspicious of products bought and sold at a market and much prefer to deal direct with the producer whom they believe has a greater interest in the product sold and will give a greater service for the money spent.

Roadside markets to be effective should be neat and attractive. They should show as much honey as possible from a distance, and should have a convenient parking space. The honey should be packed in convenient sizes and attractive containers.

There are still many heavily traveled highways in Pennsylvania along which there are no roadside markets that sell honey and along which considerable honey could be sold.

An occasional novelty or variation from the normal program should help considerably to bring honey to the attention of the public. For instance, a small cake of wax could be offered with each sale made during a certain period, or a honey drizzler could be given free to each person returning five or ten labels from your honey jars.

The marketing situation in Pennsylvania is one that varies according to the locality but because of the large population of the State still offers many opportunities to the beekeeper who is willing to put some time and thought into his marketing program.

BOUQUETS FOR POLLINATION OF ORCHARD FRUIT

By Enos H. Hess, Mechanicsburg, Pa.

There is usually an abundant bloom on our fruit trees, especially the apple, but it is not unusual to have a poor set of fruit. Weather conditions, fertilization or orchard and insects are the principal factors which enter into the problem.

The most concentrated fruit region in Pennsylvania is in Adams County. The county agent, M. T. Hartman, has cooperated with some of the fruit growers in making a study of how to most effectively use bouquets to secure adequate pollenization.

It is assumed that the pollen is carried largely by honey bees as they gather nectar from the bloom.
Experiment No. 1

York Imperial block of trees pollenized with bouquets of Jonathan Blossoms.

Three rows distant from bouquets					
Tree No. 1	12	Bus.	Tree No. 1	1	Bus.
2	11	Bus.	2	4	Bus.
3	11½	Bus.	3	4½	Bus.
4	4	Bus.	4	3½	Bus.
5	12	Bus.	5	3	Bus.
6	11¼	Bus.	6	2	Bus.
61¾ Bus.			18 Bus.		

York Imperial pollenized with Grimes Golden Bouquets.

Four rows distant from bouquets					
Tree No. 1	10	Bus.	Tree No. 1	5	Bus.
2	8	Bus.	2	2½	Bus.
3	10½	Bus.	3	3½	Bus.
4	8¾	Bus.	4	4	Bus.
37¼ Bus.			15 Bus.		

EFFECT OF WIND ON BEE FLIGHT

A solid block of York Imperial trees were taken and three bouquets of Jonathan blossoms were placed on every other tree in the middle row of the

orchard. A rather severe East wind prevented the bees from reaching the East side of the orchard and the yield of fruit very clearly shows that the bees could not work so well in the East side. The results are as follows:

Average Bus. per row west of bouquets	200 Bus.
Average Bus. per row with bouquets	221 Bus.
Average Bus. per row East of bouquets	91 Bus.

Relative value of different sources of pollen in fertilizing York Imperial bloom.

Pollen Source	York Imperial Spurs	No. Spurs Set	Percent Set
Grimes Golden	91	75	82
Red Delicious	88	65	74
Golden Delicious	72	51	71
Jonathan	93	61	65
Baldwin	130	40	30
York Imperial	113	10	9
No pollen	96	1	1

BEEES FOR POLLINATION

By Enos H. Hess, Mechanicsburg, Pa.

The commercial orchardist having five or more acres of fruit trees cannot afford to be without bees in his orchard during blooming period. He may own and operate his own apiary but the necessary skill and time for a successful apiary is usually best to be assigned to one who makes a specialty in apiarian work.

In some orchards most years, and in most orchards some years poor pollination lowers yields and reduces profits. Bees maintained in orchards is similar to an insurance policy.

An orchardist in Adams Co., Pa., having 130 acres in apples had a crop of 7200 bushels in 1932 with no bees supplied. In 1933 he rented 100 colonies of bees and secured a crop of 42,000 bushels.

Some of the Experiment Stations have demonstrated the importance of bees by screening trees with bees enclosed and others with bees excluded. There was less than one per cent of a set of fruit where bees were excluded and as high as 44 per cent where bees were provided within the screen. In one instance a tree screened with bees enclosed yielded 1200 apples and another tree nearby of the same variety with bees excluded had 25 apples.

Nature provides more bloom than is needed for a crop but since the pollen grains of fruit trees is quite moist it is not carried appreciably by the wind and hence must be carried by insects. There are over 200 species of insects that may assist in pollination. However, it has been estimated that 90 per cent of fruit set is brought about by honey bees.

Some varieties of apples are self sterile, others are inter-sterile as related to some varieties; thus the necessity of bees to transfer the pollen. Where large blocks of one variety of fruit has been planted bouquets of other varieties are placed in tubs or pails so as to provide the necessary pollen for bees to transfer. A honey bee may carry as many as 100,000 pollen grains on its body at one time.

It is presumed ideal if colonies of bees are placed at regular intervals of about 210 feet apart or one colony per acre as they cannot fly far in cool weather as frequently obtains during blooming time. Below 60° F. they can take only short flights, at 65° F. they can fly more freely but only above 70° F. can they make full flights and may travel two or more miles.

The colonies should be strong at blooming time. A bee weighs 1-5000 of a pound. It is estimated that there is approximately one-half pound bees for each frame of brood, hence, to have three pounds or 15,000 bees there needs to be six frames of brood. It is believed that a colony with twelve frames of brood or six pounds, or 30,000 bees can do four times as much good in pollinating as a colony

having only six frames of brood. Hence, relative colony efficiency is as the square of their numbers. If all the colonies had twelve frames of brood one such colony would suffice for four acres of orchard. The average man that keeps bees does not have his colonies strong enough at fruit blooming time to be of much service in pollination.

A three pound package hive is considered not as efficient for pollination as an equal number of bees in an established hive. Since a three pound package of bees with queen, costs about \$3.50 and a five pound package costs about \$5.00 a strong colony of bees with ten or more frames of brood should be worth a rental charge of about \$5.00 per season.

If an apiarist should care to maintain an out apiary at an orchard and the orchardist would exercise due care in the way and time he sprays so as to not poison the bees a less rental would be justified.

A contract should be made covering the obligation of the orchardist and apiarist and each aim to carry out in good faith their part of the contract. There is need of co-operation and each party can be helped by the other; thus, providing proper pollination for the orchardist and at the same time allow the apiarist to secure a crop of honey.

Spraying should not be done when the trees are in bloom. A liquid spray is much safer than dust sprays. There should be no blooming vegetation under the trees when poison sprays are applied.

With the heavy spray schedule as now practiced by orchardists it may be safest for the apiarist to have his bees located three to four miles distant from the orchards except during blooming time.

Some of the hazards the apiarist must anticipate and be remunerated for is, the bees smothering in transit or escaping from the hives and stinging animals and people. The combs may be broken and the bees drift to the former location and also, disease infection may occur.

As large orchards are established it will become incumbent to provide bees in some way for pollination for profitable crops.

The larger the orchard acreage becomes in any region the poorer the seasonal bee pasturage is likely to become and the greater the necessity of importing bees for the blooming period.

Where the orchard is located in a general farming region which will supply bee pasturage during the summer season, an apiary could be located in or near the orchard at a minimum expense to the orchardist and greatest profit to the apiarist. It would largely obviate the necessity of scattering the bees in the orchard which necessitates extra labor and usually a loss of bees by drifting, etc.

Colonies given a permanent location could be kept in two ten frame hive bodies and developed into full strength for the blooming period. It is quite cumbersome to distribute such large colonies in the orchard.

The Experiment Stations at Ithaca, N. Y., New Brunswick, N. J., and College Park, Md., have issued very good bulletins on the subject of Pollination. A study of the subject with suitable publication of results obtained would, we believe, be very much worthwhile by the Penna. Experiment Station.

MEMORIES OF A BEEKEEPER

John H. Hess, Grantham, Penn.

There are two groups of beekeepers—those who know how to take care of bees, and those who just "keep bees." In inspecting, we find only about 10 per cent. of the apiaries well-kept. One farmer who resented our intrusion said he knew a lot about his bees, but did not bother to look at them often. He was using box hives, and we notified him twice, with no effect, that he must put his bees into movable hives. It is a pleasure to look over the hives of good beekeepers and talk over their problems with them. Some appreciate our calls; another element does not have any appreciation. It is a nice job, with all the

problems. We see different methods of keeping bees. We get into different localities.

The chief difficulty to meet is that of home-made equipment, especially in the summer. In a nice clover section, about July, we will find five supers one on top of the other, with about 1-2 inch space between. It is quite a job to try to get them apart. The use of home-made equipment is false economy because Foul Brood is very hard to get rid of, and is very prevalent where home-made equipment is depended upon. These beekeepers often try to save too much, especially in cleaning up Foul Brood.

Last Fall, I was in the market for a good grade of honey, so whenever I got into a good apiary, I went to one of the good hives looking for some. But there was always something wrong, even in the apiaries which I knew should be good ones. It is the fault of the beekeepers themselves that they cannot sell, for they do not have a quality product to put on the market. I am speaking to the 10 per cent. group, of course, for if any of you people belonged to the 90 per cent. group, you would not be interested enough to trouble to be here. Often, however, our inspection work is retarded because beekeepers do not give all the information that they should. If they would just co-operate a little more with the inspectors as they come around, it would help in getting the disease under control. My work is interesting. There is such an element of uncertainty for I never know when I am going to be asked in to dinner or when I am going to be asked to leave, in no uncertain terms.

JANUARY 24th, 1935—10:00 A. M.

The Meeting was called to order by the President.

In order that it might be read at the Hort. Meeting, the following resolution was read by the Sec'y-Treas. and a motion was made, seconded and carried that it be accepted.

Resolved; That due to the continued large number of American Foul Brood diseased colonies of Bees, we ask the Secretary-Treasurer to request the help of the Department of Agriculture and State Council of Agricultural Association in having allotted to Apiary Inspection service additional funds of sufficient amount to increase the number of Deputy Apiary Inspectors so as to completely cover all Counties in the State this year, thus making a complete clean-up, getting and keeping American Foul Brood in control. Bees are as much benefit to fruit-growers as to the Beekeepers. Estimated appropriation necessary \$25,000.

Grades and Grading Honey—Charles A. Reese.

Beekeepers were invited to pay their dues, and anyone wanting to get Gleanings or American Bee Journal can get it through Sec'y-Treas. at \$.50 each.

1:30 P. M.

Mr. Anderson exhibited the honey drizzler. Made by Cascadden Brothers, Lapel, Indiana. The price of the caps when bought separately was not given.

Swarm Control—Allen Latham.

Comb Honey Production by the Demaree Method, Frederick Hahman, P. O. Box 3, Altoona, Pa.

Speech of Welcome—J. Hansell French, Sec'y of Agr., Harrisburg, Pa.

I am very glad to have this opportunity to thank you for the important part which you played in the great Farm Show. My family all love honey, we are one of your best customers. I am informed that you have the highest quality exhibit you have ever shown. I shall appreciate greatly your continued co-operation.

Mr. Hagar, Asst. Secretary of Agriculture, introduced Mr. French.

Mr. Hagar, we hope to improve the service which has been rendered by the Department in the inspection work. Mr. French wants to study it. That is why he wanted to come here today. Mr. Kirk is interested that we in the Agricultural Office should know the conditions.

I am glad to have the opportunity of saying "Hello" to you. I hope you will feel free as in the past few years, to come in to us, and we will see what we

can do to help you. Our income in 1932 was at its low ebb. Last year there was increase of 25 per cent. over the low of 1932. This is encouraging, and I believe we are ready to face an up-grade in the agricultural depression. The greatest thing we need is more confidence.

Due to the absence of chairman of the Resolutions Committee the Sec'y-Treas. read their report, which on motion, seconded and carried was adopted.

We, the Members of the Pennsylvania State Beekeepers Association, appreciate the privileges accorded us in furnishing space for the Honey Exhibit and the room for our Beekeepers Annual Meetings. We consider this fundamental to the success of our various activities in promoting Bee Culture in the State of Pennsylvania.

We wish to extend our thanks to the Farm Show Commission and those responsible for these facilities.

Resolved, that due to the continued large number of American Foul Brood diseased colonies of Bees we ask the Secretary-Treasurer to request the help of the Department of Agriculture and the State Council of Agricultural Associations in having allotted to Apiary Inspection Services additional funds of sufficient amount to increase the number of Deputy Apiary Inspectors so as to completely cover all the Counties in the State this year, thus making a complete clean-up, getting and keeping American Foul Brood in control. Bees are as much benefit to fruit-growers as to the Beekeepers. Estimated appropriation necessary \$25,000.

We deeply appreciate the services of visiting speakers in adding to our interesting program. Mr. Allen Latham, Mr. Charles A. Reese, Mr. M. G. Dadant, Mr. Jerry Frazer.

We very much appreciate the efficient services of the officers of this Association in carrying on the work of the Association throughout the year.

Be it resolved that we commend the Exhibitors for the splendid display of their products. The best we have ever had at the Farm Show.

There is a growing need for organizing experimental work at State College for studying problems relating to fruit pollination by honey bees and proper processing of honey for market.

Resolved that we record in the minutes of this meeting our sincere sympathy in the loss of our beloved Brethern, Father Martin G. Hepner and Mr. Charles N. Greene, who were called to their reward during the past year.

John S. Fleck
A. G. Trainer
Charles S. Hess, Committee.

Discussion: Concerning the resolution that experimental work should be organized at State College for studying problems relating to fruit pollination by honey bees and the proper processing of honey for market. Motion that the resolution be accepted and taken over to the fruit section Mr. Enos H. Hess delegated, seconded, carried.

Recommendations of changes in By-Laws:

That to Article 1 which reads "This Association shall be known as The Pennsylvania State Beekeepers' Association. ADD "The Official Organ of this Association shall be known as "The Pennsylvania Beekeeper."

Motion made, seconded and carried that this change be made.

Add

That in Article IV, Section 3, which reads, "The members of any local or county Beekeepers Association in the State of Penna. may become members of the Pennsylvania State Beekeepers Association by payment of fifty cents (\$.50) dues per year providing the paid-up members are at least ten in numbers. The dues are to be remitted to the Secretary-Treasurer of the State Association by the Treasurer of the local Association."

Motion made, seconded and carried that this addition be accepted.

That Article VIII be changed to read as follows: "This Constitution and

By-Laws may be amended by a majority vote at any Regular Meeting, providing thirty days notice of the proposed change shall have been given each member. The columns of the Pennsylvania Beekeeper shall be deemed legal notice."

Motion made, seconded and carried that this be adopted.

That Article IX, Section 2, be changed to read as follows: The Executive Committee of the Association shall have general supervision, but the Secretary-Treasurer, when duly qualified, shall be the custodian of the fund, the Secretary-Treasurer shall qualify by giving the Executive Committee surety for the amount of the Permanent Accumulative Fund and other monies to be turned over by the retiring Secretary-Treasurer. This surety to be kept in force until newly-elected Secretary-Treasurer qualifies.

Motion made, seconded and carried that this be adopted.

That Article IX, Section 3 be changed to read: "Only the annual income from the Permanent Accumulative Fund shall be available for annual expenses. The Treasurer's balance or any portion of it may be deposited to the Permanent Accumulative Fund.

Motion made, seconded and carried that this be adopted.

That Article 1, Section 1. which reads "The Executive Committee of this Association shall consist of the Elective Officers of the Association, the Past Presidents, and one representative from each affiliated Association (Add) A quorum shall consist of five (5) members."

Motion made, seconded and carried that this be adopted.

Question of transferring some of the Savings Account to the Checking account to keep the balance over \$50.00 and save the \$.50 a month, which is taken off by some banks where the balance gets below \$50.00. Decided that this would be unconstitutional.

1:30 P. M.

Question whether we should join the State Council of Agricultural Associations of Pennsylvania. Membership from \$2.00 to \$5.00. A representative from this Association would sit in on their meetings. Purpose: to get backing for our requests for appropriations and any other matters that may come up from time to time affecting beekeepers and beekeepers problems in general.

Motion made, seconded and carried to join this Association.

Question? Is it the wish of our Association to give money to the American Honey Institute? How much? Discussion as to amount. The opinion of the President that this year the Association is in no shape to give more than \$5.00. but that when the financial condition becomes better, the Association should give more generously.

Motion, That this Association donate \$5.00 (if that much is available after paying all bills) to the American Honey Institute. Seconded and carried.

Mr. Adam Glad's question discussed: "Is it legal to use honey jars twice? Tentative agreement that glasses can be used the second time if you have a sterilizing plant.

Report by Mr. Enos H. Hess from the fruit-growers' meeting. They voted to ask for \$25,000 to go to State College for experimental work.

Motion, seconded and carried we adjourn.

Something on this order:

We regret that Mr. Harry W. Beaver was not able to be with us, he having left some weeks ago for Florida, we missed his smiling face, and words of advice, and hope he will be with us next year.

(There are still two papers from the winter meeting—one by Frederick Hahman and one by Mr. Dadant to be published in a later issue. Ed.)

NOTES FROM COUNTY ASSOCIATIONS

MEETING OF THE CAMBRIA COUNTY BEEKEEPERS' ASSOCIATION

June 12, 1935

The Beekeepers meeting on June 12, 1935 was held at the W. F. Osman farm at 6:30 P. M. Mr. Gus Niles was in charge. Thirty-five beekeepers were present. The minutes of the last meeting were read and approved.

Mr. Osman, Mr. Niles and Mr. Krug gave discussions on bee management.

During the business session Mr. Niles discussed the need for inspection to control Foul Brood.

Mr. Anderson talked on the value of keeping a hive on scales to check the honey flow. A discussion on swarm control was followed by a series of questions on building up a colony.

The next meeting of the Beekeepers' Association is to be held in Munster, Pa., at the home of Archie Krug, sometime in the latter part of August.

New members admitted were: J. O. Seese, Portage, Pa.; F. L. Barnhart, 7 Jefferson St., Johnstown, Pa.; F. A. Noel, R. F. D., Cresson, Pa.

Balance in Treasury June 12, 1935	\$5.50
Receipts at meeting	3.00

Total	\$8.50
Dues paid to State Association	\$1.50

Balance in Treasury	\$7.00
Archie Krug, R. F. D., Cresson, Pa., Temporary Sec'y-Treas.	

(Note: This recently organized Association now has thirteen members in the State Association previous to organizing only had two, from this County).

BERKS COUNTY BEEKEEPERS ASSOCIATION

The thirteenth Annual Meeting of the Berks County Beekeepers Association was held on Tuesday evening, March 5th, 1935, in the Board Room of the Chamber of Commerce in Reading, Pa.

The principal speaker was Mr. E. J. Anderson, Extension Apiarist, State College, Pa.

The By-Laws were changed so that the yearly dues will give membership to the Penna. State Beekeepers Association as well as our local Association.

At present we have sixteen (16) members who joined the State Association.

Mr. E. P. Fowler our Assistant County Agent and a very good friend of the Beekeepers gave a few remarks.

The following officers were elected: President, Harry Slegel, Birdsboro, Pa.; Vice-President, John Weidman, Mohrsville, Pa.; Sec'y-Treas., Ray R. Bagenstose, Mohrsville, Pa.

Ray R. Bagenstose, Sec'y-Treas.

(We note this Association has on their letterheads: "Affiliated with the Pennsylvania State Beekeepers' Association"). Very good.

YORK COUNTY BEEKEEPERS ASSOCIATION

The Regular Annual Meeting of the York County Beekeepers Association was held on March 27th in the Federal Building, York, Penna. In co-operation with our County Agent.

Prof. E. J. Anderson was the principal speaker. At this meeting the Association voted in favor of joining the State Association.

We now have thirteen members in the State Association, and hope to get many more. The following officers were re-elected: President, Chas. H. Kohler; Vice-President, E. Calvin Zeigler; Treasurer, Wm. H. Boeckel; Secretary, Morgan A. Poff, all of York, Pa.

REVIEW OF THE SEASON

Losses from starvation turned out to be rather heavy during April and May so that they cancelled the small losses suffered during the winter. Winter losses at the end of March were almost negligible. Both April and May were wet and cold so that little if any nectar could be gathered. Bees that were in excellent shape and rearing brood rapidly at the end of March were suffering from lack of food by the end of April. Even colonies that appeared to have plenty of food last fall were found to be short by the middle of May. Where bees were fed during April and May excellent results were obtained especially from locust and the early clover flow. Too many colonies, however, had to build up during the early part of the clover honey flow at the expense of the surplus crop.

The fruit bloom yielded little in the southern half of the State but beekeepers in Erie County reported a good surplus from fruit some as high as fifty pounds to the colony.

The yield from the clovers has been very spotted. In one apiary in York County a colony on scales gathered 99 pounds in 13 days while apiaries fifteen and twenty miles distant showed little or no surplus. The yield of clover honey in the south and southeastern parts of Pennsylvania is considerably below that of last year. Considerable honeydew was gathered during May which is unusual for that time of the season.

Swarming was very light during the normal swarming period of May and June. The cold weather and slow honey flow of early June started late swarming in earnest so that some beekeepers had a great deal of trouble from this cause when the swarming season should have been past. Even package bees with a half super of extracted honey swarmed and left for the woods during the last of June.

The heavy rains have helped the clover in Northern Pennsylvania so the surplus crop in that area is above average for colonies that had sufficient food early or did not swarm.

Basswood trees are carrying a heavy set of bloom as have most flowering plants this spring. Weather permitting basswood should yield a good surplus during July.

The present rains should also put the fall flowers in excellent condition for a surplus from goldenrod, asters and silverrod.

Honey markets are in excellent shape since all or nearly all large lots of honey were sold before and new honey was harvested. Most beekeepers will begin the new marketing season with the new crop of honey. Prices help up in a very satisfactory manner last season when one considers the large crop harvested in this State.

Beekeepers should make every possible effort to advertise their honey and

to help the American Honey Institute so that this favorable position in marketing may be maintained. The crops of honey harvested in neighboring states have a direct effect on our prices and the work of the Institute helps the markets in all sections and both directly and indirectly improves conditions for Pennsylvania beekeepers.

DECEASED

It is with deep regret that we heard of the death on March 21st, 1934, of one of our very active Association members, Mr. H. C. Klinger, R. F. D., Liverpool, Pa.

From available records Mr. Klinger joined the State Association in February 1906, and upon his retirement from holding office was presented at a surprise presentation, with a gold watch as a slight token of appreciation from his co-workers and Association members. On the inside case of this watch was engraved the following:

Presented to
H. C. Klinger, By The Penna. State Beekeepers Assoc.
President
From Jan. 18, 1907 to Nov. 13, 1908
Secretary

From Sept. 19, 1910 to January 23, 1919

In 1922 he was one of the field men on inspection, traveling from Liverpool to Reading.

Mr. Klinger was a very active beekeeper and is missed very much in the community in which he lived. He began teaching school at the age of 17 years, taught 42 terms, served as County Supt. of Juanita County six years—1902-1908, and died suddenly at the age of 67 after an illness of 13 days of bronchial influenza, followed by toxic poisoning.

Allen I. Klinger has taken over the bees of his father and we hope he will become as active a member of our Association as his father was.

BRADFORD COUNTY NOTES

By Harry W. Beaver

The season started in with bees strong, clover looking unusually well, and basswood promising at least half a bloom and a good to bumper crop in the offing. Well, clover came on in a fair way and the flow started in as tho it meant business, but July 7th, when the heavy York State rains occurred, the flow shut off short and bees have not made a living since, altho the basswood bloomed and went with never so much as a smell of honey. At this writing, July 29th, we are two-thirds through extracting, and while some yards did well, some had very little surplus. Our average will be about two-thirds of a crop of clover honey.

Buckwheat is doing fine in the way of growth and some early fields are just beginning to bloom and we are hustling the clover honey off hoping to get through before the buckwheat colors it. We have had ample rains through this section for all farm crops. We extend our sympathy to our York State neighbors, some of whom lost considerable number of colonies during the floods above mentioned.

Last year's honey was pretty well cleaned up and this year's crop should bring at least last year's price.

It was with sincere regret that I heard of the death of our old friend, Prof. H. C. Klinger. Though not so active in later years, he was one of our standbys for a great many years in our association.

One by one the old folks pass on and young folks take up the work. Now a word about our picnic at Lancaster. I think it will pay us to take a few days vacation and get better acquainted with our fellow beekeepers. We often pick up ideas at these meetings that are invaluable, and often the veriest greenhorn will stumble on to something that us old vets never thought of. So let's go to Lancaster.

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THE PENNSYLVANIA BEEKEEPER



Honey Recipes

PUBLISHED BY DIRECTION OF THE ASSOCIATION

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THE FARM SHOW

Final arrangement and selection of honey should be made soon for all honey to be shown at the Farm Show at Harrisburg next January. Collective exhibits require considerable time and work if a creditable exhibit is to be made.

Each year the honey exhibit becomes larger and more beautiful in appearance and it is a credit to the beekeepers that this is so. We should strive to make the next the best exhibit of all.

An excellent program is being arranged for the beekeepers meetings on Wednesday and Thursday. Dr. Phillips and others will speak. There will be a banquet at Jackson's Restaurant Wednesday evening.

The beekeepers are urged to read carefully the rules in the prize list especially for collective exhibits. If the rules are broken it puts both the committee and the beekeeper in an embarrassing position.

HONEY RECIPES

These recipes were selected from various publications and arranged by Edwin J. Anderson, President of the Pennsylvania State Beekeepers Association.

HINTS FOR THE USE OF HONEY IN COOKING

Many flowers produce nectar for the bees to convert into honey. Each flower imparts a distinct flavor so that there are as many flavors of honey as there are flowers producing it. The difference in flavors may also be detected in many of the products baked with honey. Personal likes and dislikes for the different flavors of honey should be kept in mind when honey is used for baking as well as when honey is served on the table. Most people prefer the kind of honey they were accustomed to when children. It is difficult to use buckwheat honey in baking cakes, cookies, or foods with a mild flavor. This kind of honey may be used to advantage, however, in making most products that are spiced or carry a more pronounced flavor.

A cup of honey contains 9 1-2 ounces of sugar plus 17 to 20 per cent water. A cup of sugar contains 7 ounces of sugar.

When honey is used to replace sugar in a recipe about 1-4 of the liquid or four tablespoonfuls of liquid should be left out for each cup of liquid in the recipe.

Baking powder can be used as the leavening agent for recipes containing honey.

Honey retains moisture so that cakes and cookies baked with honey remain

fresh for a longer period of time. Many of the baked products in which honey is used improve both in flavor and texture after they have stood two or three weeks.

Because of the great difference between honey and sugar it is best not to use honey in place of sugar unless the recipes have been tested.

Extracted honey can be used to advantage on breakfast cereals especially the prepared cereals. The delicate flavors of honey blend especially well with those of the cereals.

Avoid over heating when honey is used in the recipe. Follow directions for oven temperature as closely as possible.

Honey is excellent on hot biscuits, muffins, waffles, toast, hot cakes, and on peaches when they are sliced and served with milk.

GENERAL RECIPES

SANDWICH FILLINGS

1. Honey with peanut butter, using about 1 part of peanut butter to 2 parts of honey.
2. Honey with butter, beat 1 part of honey with 1 part of butter. This mixture is also tasty with hot biscuits, waffles, toast, and pancakes.
3. Honey, nut, fruit filling. One-half cup honey, 1-4 cup butter, 1-4 cup chopped dates and 1-4 cup chopped walnuts.
4. Honey cheese filling. Two tablespoons cheese and 1 tablespoon honey. This filling may be improved by adding 1 teaspoon catsup and 2 table-
spoons chopped olives.

SALAD DRESSING

4 egg yolks	1 teaspoon mustard
2 tablespoons vinegar or lemon juice	1 teaspoon salt
2 tablespoons butter	Paprika to taste
2 tablespoons honey	1 cup cream

Heat the cream in a double boiler. Beat the eggs and add to them all the other ingredients. Pour the cream slowly over the mixture, beating constantly. Pour it into the double boiler and cook until it thickens. As the dressing is needed, combine this mixture with whipped cream. This dressing is particularly suitable for fruit salads.

FRUIT SALAD DRESSING

$\frac{1}{4}$ cup strained honey	$\frac{1}{2}$ cup olive oil
$\frac{3}{4}$ cup lemon juice	2 teaspoons paprika
$\frac{1}{2}$ cup hot water	

Mix honey with hot water, add lemon juice, paprika, stir with egg beater, add oil and beat again.

ICED CHOCOLATE

$1\frac{1}{2}$ cupfuls milk
2 teaspoonfuls cocoa
2 tablespoonfuls honey

Let milk come to boil, mix cocoa, and honey, remove heated milk from fire. Add cocoa and honey mixture. When honey cocoa mixture is thoroughly blend-
ed with warm milk, pour over cracked ice in tea glasses.

LEMONADE

2 teaspoons lemon juice	1 tablespoon honey
2 tablespoons orange juice	$\frac{3}{4}$ cup water
1 teaspoon sugar	

Blend thoroughly the lemon juice and sugar. Add the honey and orange juice, then stir. Add the water and a few cubes of ice to chill. A few crush-
ed mint leaves will improve its flavor.

BAKED BEANS

1 pound navy beans	1 small onion
3 tablespoons honey	Salt to taste
Slice of cubed fat pork	

Bake in medium oven until a golden brown.

GLAZED SWEET POTATOES

6 medium sweet potatoes	$\frac{1}{4}$ cup water
$\frac{1}{3}$ cup brown sugar	2 tablespoonfuls butter
$\frac{1}{3}$ cup honey	

Boil the sweet potatoes in their skins. Peel and halve lengthwise and arrange in a greased baking dish. Make a mixture of hot water, honey, sugar and butter. Pour over the sweet potatoes. Cook slowly in a moderate oven (400 degrees F.) for about 30 minutes. Baste frequently.

JUNKET

Honey may be used with pleasing results in making junket. Substitute an equal quantity of honey for the sugar specified in the directions (three
tablespoons honey instead of three tablespoons sugar). Omit the vanilla when
honey is used as a sweetening agent.

RICE PUDDING

4 cups milk	$\frac{1}{2}$ teaspoonful salt
$\frac{1}{4}$ cup honey	$\frac{1}{3}$ cup rice
$\frac{1}{2}$ cup raisins	

Combine the washed rice and other materials. Bake slowly for about three
hours stirring frequently.

DROP BISCUITS

2 cupfuls of flour	4 tablespoonfuls of fat
4 teaspoonfuls of baking powder	$\frac{1}{4}$ cupful of honey
$\frac{1}{2}$ teaspoonful of salt	$\frac{1}{2}$ cupful milk

Sift the dry ingredients, then cut in the fat with two knives. Mix the
honey and milk and add to the dry materials carefully. Drop into greased
pans and sprinkle lightly with sugar and cinnamon. Bake in a hot oven
(400 degrees F.) 12 to 15 minutes.

MUFFINS

1 cup milk	6 teaspoons baking powder
$\frac{1}{2}$ cup strained honey	$\frac{3}{4}$ teaspoon salt
$\frac{1}{2}$ cup granulated sugar	3 eggs
3 cups flour	$\frac{1}{4}$ cup melted butter or other fat

Pour milk into a mixing bowl, add honey, sugar and stir well. Add beaten
eggs. Sift flour with baking powder and salt, add to liquid. Use a wire spoon
beater for combining ingredients. Add butter. Stir quickly and use only a very few
strokes. Put into oiled muffin pans at once and bake in a hot oven (375-400 de-
grees F.) 12 to 15 minutes.

CAKES AND COOKIES

HONEY GINGERBREAD

- | | |
|---------------------|----------------------|
| 2 cups flour | 1 cup honey |
| ½ cup sugar | 1 cup lukewarm water |
| 1½ teaspoon soda | ½ cup shortening |
| 1 teaspoon ginger | 2 eggs |
| 1 teaspoon cinnamon | |

Mix together the honey and lukewarm water and add to dry ingredients. Then add shortening softened to a creamy consistency. Last add beaten eggs with only a few strokes. Pour into an oiled pan, to a depth of about 3-4 inch. Bake in moderate oven (350-375 degrees F.).

PRUNE CAKE

- | | |
|---------------------------|--------------------------------|
| ½ cup honey | ½ cup shortening |
| 1 teaspoon cinnamon | 2¼ cups pastry flour |
| 1 egg | 1¼ cups soaked prunes (stoned) |
| ½ cup sour milk | ½ cup sugar |
| 2 teaspoons baking powder | ½ teaspoon soda |

Cream the shortening, sugar, and honey thoroughly. Add beaten egg and beat well. Add sifted dry ingredients alternately with sour milk. Beat thoroughly after each addition of dry ingredients. Add chopped prunes. Put batter into two layer cake tins. Bake in a very moderate oven (325 degrees F.) for 1 1-4 hours. Ice with honey meringue.

SPICE CAKE

- | | |
|----------------------------|---------------------------|
| 1 cup solid shortening | ¾ cup strained honey |
| 1/3 cup granulated sugar | 2 eggs |
| 3 cups pastry flour | 4 teaspoons baking powder |
| ½ teaspoon salt | ½ teaspoon soda |
| 1 cup buttermilk | ½ teaspoon ground cloves |
| 1 teaspoon vanilla extract | ½ teaspoon grated nutmeg |
| ½ cup nut meats | 1½ teaspoons cinnamon |

Cream the shortening and gradually add the sugar. Beat honey into mixture and add the well beaten egg yolks. Sift together all the dry ingredients. Add a small amount of the dry mixture and all the rest alternately with the buttermilk. Add vanilla. Cut and fold stiffly beaten egg whites into the batter. Bake in a loaf pan at 350 degrees F. for 45 to 50 minutes or in three layers at 375 degrees F.

DARK HONEY CAKE

- | | |
|---------------|--------------------------|
| 2/3 cup sugar | 2/3 cup sweet milk |
| ½ cup butter | 1 teaspoon baking powder |
| 2/3 cup honey | ½ cup cocoa |
| 4 egg yolks | 1½ cups sifted flour |

Cream butter, add sugar, honey and beaten egg yolks. Then add dry ingredients alternately with milk. Beat well.

UPSIDE-DOWN APPLE CAKE

Batter

- | | |
|-------------------------|----------------------------------|
| ¾ cupful of honey | ½ cupful of shortening |
| ¼ teaspoonful of soda | 1 teaspoonful of baking powder |
| ¼ teaspoonful of nutmeg | ½ teaspoonful of cinnamon |
| 1 egg | 1½ cupfuls of flour |
| ½ teaspoonful of ginger | ½ cupful of milk (sweet or sour) |
| ¼ teaspoonful of salt | |

Blend honey and shortening, add the beaten egg, then the sifted dry ingredients alternately with milk.

HONEYED APPLE RINGS

Wash apples, core, and slice crosswise in rounds about one-half to three-fourths inch thick (an ordinary apple will give four such slices). With the skin on, place apples in kettle and cover with honey. Bring to bubbling point and let apples simmer until clear (for Winesaps and Delicious about 10 minutes are required). Now the apples are ready for making upside-down cake. By leaving the skin on, much of the food value of apple is retained in addition to adding to the syrup pectin, which makes it jell. This syrup, which is really thin jelly, is the honey apple syrup used in the bottom of the skillet.

TO MAKE UP-SIDE DOWN CAKE

Melt 1 1-2 tablespoonfuls of butter in skillet. Add one-half cupful of honey apple syrup and heat to boiling point. Remove from fire and fit honeyed apple rounds into bottom of skillet. Fill spaces between rounds of apples with nut meats. If desired cherries may be placed in the center of each apple. Pour batter over rounds of apples and bake in moderate oven (350 degrees F.) about 30 minutes.

Turn out cake on serving plate, fruit side up and serve with honey butter, honey meringue, or whipped cream.

FRUIT CAKE

- | | |
|--|-----------------------|
| 3½ cups dark honey | ½ teaspoon cloves |
| 1 cup butter | 2 teaspoons vanilla |
| 6 cups flour | 3 lbs. seeded raisins |
| ½ cup white grape jelly or white grape juice not sweetened | 1½ lbs. currants |
| 6 eggs | 1 lb. citron |
| 2 teaspoons soda | Candied fruit: |
| 2 teaspoons cinnamon | 1 lb. cherries |
| 2 teaspoons ground spices | 1 lb. Apricots |
| 2 teaspoons ginger | 1 lb. pineapple |
| 3 teaspoons cardamon | 2 oz. orange peel |
| | 2 oz. lemon peel |

Run all the candied fruit through a chopper, except the cherries, and put it all in a large dish. Sift half of the flour over it and mix thoroughly. Sift the soda together with the other half of the flour. Boil honey and butter together, and when boiling add thoroughly mixed spices. When this mixture is cool, beat well the egg yolks and mix them in, then the flour and soda, always stirring, then the jelly or grape juice, and the well beaten egg whites. Now add the fruit mixture and mix thoroughly, then put the dough into buttered tins. Allow it to steam for five hours, then take off the paper, and bake in a very slow oven for one hour. If more desirable, cake may be baked slowly for 3 hours, instead of the combined steaming and baking process.

If nuts are desired in the cake, you may add 2 cups chopped walnuts, 1 cup chopped almonds, 1 cup chopped pecans. Chopped dates and figs may also be used instead of or in addition to the fruit ingredients.

OATMEAL COOKIES

- | | |
|--------------------------|---------------------------------|
| 1 cupful honey | 2 cupfuls of flour |
| 2/3 cupful of fat | ½ teaspoonful of soda |
| ½ teaspoonful of salt | 2 teaspoonfuls of baking powder |
| 2 eggs, beaten | 1 teaspoonful of cinnamon |
| 2 cupfuls of rolled oats | 1 cupful of chopped raisins |

Cream the fat and honey together, then add the eggs. Mix and sift the flour and baking powder, and other dry ingredients, then add to liquids. Add rolled oats and raisins mixing well. Drop by teaspoonfuls on a greased pan. Bake in a moderate oven 10 to 12 minutes.

GINGER SNAPS

2 cups honey	2 tablespoons ginger
1 cup butter	6 cups flour
3 teaspoons soda	

Bring the honey and butter to the boiling point, then cool. Add the soda and beat until very light. Put the ginger into the flour, then pour in the butter and honey and mix. Roll as thin as possible and bake in a rather quick oven.

LEBKUCHEN

½ cup honey	2½ cups flour
½ cup molasses	1 teaspoon allspice
¾ cup brown sugar	1 teaspoon cloves
1 egg	1 teaspoon cinnamon
1 tablespoon lemon juice	1 teaspoon nutmeg
1 teaspoon grated lemon rind	1/3 cup chopped citron
½ teaspoon soda	1/3 cup chopped nuts

Mix the honey and molasses and bring to a boil, then cool thoroughly. Add the brown sugar, well beaten egg, lemon rind and juice. Sift the flour once before measuring. Mix and sift the flour, soda, cinnamon, cloves, allspice and nutmeg, and stir into the honey and sugar mixture. Add citron and nuts. Let stand over night in refrigerator. In the morning roll out to 1-4 inch thickness and cut with oblong cookie cutter about 3 1-2 x 4 1-2 inches. Place cookies on greased baking sheet and bake. Immediately on removing from oven spread icing over all the cookies before removing them from pan. Bake 15 minutes in moderately hot oven (400 degrees F.).

GLAZING ICING FOR LEBKUCHEN

Boil 1 cup sugar and 1-2 cup water until first indication of a hair appears, 230 degrees F. Remove from fire, stir in 1-4 cup confectioners' sugar and use for glazing cookies.

Note: If icing becomes stiff before cookies are all covered reheat slightly, adding a bit of water, so that it can be spread easily with a brush.

DATE BARS

3 eggs	1 cup honey
1 teaspoon baking powder	1 cup flour
Pinch of salt	1 pound chopped dates
1 cup whole nuts	

Mix well beaten eggs with honey. Add sifted dry ingredients, then chopped dates and whole nuts. Bake in moderate oven about 40 minutes in long flat tin (mixture spread 1-4 to 1-2 inch thick). Pack slabs wrapped in waxed paper in covered jar or cake box and keep at least two weeks before serving. This date bar has kept in splendid condition six months. Before serving cut in strips, roll in powdered sugar, or top with honey meringue.

A TASTY DATE BAR SERVICE

Place two strips of date bar on plate, top with two tablespoons of ice cream and over this drizzle a little honey. Dress top with spoon of honey flavored whipped cream and cherry.

HONEY PIES

LEMON PIE

¾ cup honey	1 lemon, juice and grated rind
8 tablespoons flour	2 egg yolks
½ cup cold water	½ to 1 tablespoon butter
1 cup boiling water	

Blend the flour and cold water until smooth; add the honey and grated lemon rind; slowly add the boiling water, stirring constantly. Cook in a double boiler until thick. Stir in the lemon juice. Slowly add part of this cooked mixture to the beaten egg yolks, stirring constantly. Return to the double boiler and heat until the egg is cooked. Lastly, add the butter.

Pour this filling into a baked pie crust and cover with a meringue made from the two egg whites slightly sweetened. Brown the meringue in the oven. The flavor of the honey and lemon blend well in this pie filling.

PUMPKIN PIE

1½ cups canned or cooked pumpkin	¼ teaspoon ginger
¾ cup honey	2 eggs
½ teaspoon salt	1¼ cups evaporated milk
1 teaspoon cinnamon	

Mix ingredients thoroughly, pour into pastry, bake in hot oven ten minutes. Reduce heat and continue baking 30 minutes.

CREAM PIE

½ cup honey	1½ cups milk (or milk and water)
6 tablespoons flour	2 egg yolks
¼ teaspoon salt	1½ tablespoons butter

Blend the flour with a part of the liquid (cold) until it is smooth. Add the salt, honey and remainder of the liquid. Cook in a double boiler until thick, stirring frequently. Slowly pour a part of this cooked mixture over the beaten egg yolks, stirring constantly. Return to the double boiler and heat until the egg is cooked. Lastly add the butter. Pour this filling into a previously baked pastry shell. Cover with a meringue made from the two egg whites slightly sweetened. Brown the meringue in the oven. The flavor of honey is quite pronounced in this pie.

PIE CRUST

½ box corn flakes—rolled fine
¼ cup butter
1 tablespoon honey

Melt butter in pie pan, add honey, mix well, add corn flakes and mold.

DESSERTS

CUSTARD

2 eggs	2 tablespoons honey
2 cups milk (scalded)	Nutmeg

Beat eggs, add honey and gradually add scalded milk. Pour into custard cups, sprinkle nutmeg, cocoa or cinnamon on top. Set cups in pan of hot water and bake in oven at (300 degrees F.) until a silver knife inserted comes out clean or until firm.

PUDDING SAUCE

1 tablespoon butter $\frac{3}{4}$ cup honey
1 egg 1 lemon, juice and grated rind
Melt the butter, add the beaten egg, the honey and the lemon juice and grated rind. Cook in a double boiler until thick.
A filling to be put between the layers of a plain cake may be made by using two eggs in the above recipe instead of one.

FIG WHIP

1 cup dried figs 3 tablespoons powdered sugar
 $\frac{1}{4}$ cup strained honey $\frac{1}{2}$ teaspoon vanilla
2 egg whites 4 marshmallows
Wash figs, clip stems, simmer in sufficient water to cover for 30 minutes. Drain and when cool, cut in small pieces and cover with honey. Whip egg whites until stiff, add sugar gradually, beating continuously, add salt, vanilla, the figs and last of all the marshmallows which have been cut up into fine pieces.

MERINGUE

1 egg white 1-3 cup honey
Place the white of egg and honey in bowl of electric mixer and turn on second speed. Allow mixture to whip until it peaks, about 8 to 10 minutes.
If beaten by hand use one egg and one-fourth cup of honey, considerable beating is required.

FROZEN DESSERTS

LEMON-HONEY ICE

4 cups water 1 cup honey
 $\frac{3}{4}$ cup lemon juice $\frac{1}{2}$ cup sugar
Dissolve the sugar in the lemon juice, then add to the honey and water. Freeze. Yellow coloring may be added if desired.

APRICOT MILK SHERBERT

4 cups whole milk 1 to 1 $\frac{1}{2}$ cups honey
(scalded and cooled) Juice of 2 lemons
2 cups sieved canned apricots and juice (or 2 cups cooked dried apricots)
Mix fruit and honey together and add to well cooled milk. Stir well, freeze as ice cream.

ALMOND ICE CREAM

4 cups cream 2 ounces toasted almonds
3 cups milk 7 tablespoons honey
1 teaspoon gelatin 6 tablespoons sugar
Soak the gelatin in a small amount of cold milk, then scald with a cup of hot milk. Mix the ingredients together and add the finely chopped almonds and freeze. Grape nuts or other flavoring material may be used instead of the almonds.

STRAWBERRY MOUSSE

1 quart strawberries
 $\frac{3}{4}$ cup light honey
1-1 $\frac{1}{2}$ ounce can evaporated milk
To one quart box of strawberries. Wash, hull and mash the strawberries, add the honey, mix thoroughly. Add the evaporated milk (whipped) which has been previously boiled and chilled. This mixture will freeze in about four hours in a mechanical refrigerator. Other fruits may be substituted.

CANDIES

WALNUT CREAMS

1 cup grated chocolate 3 tablespoons butter
1 cup brown sugar 1 teaspoon vanilla
1 cup extracted honey 2 cups finely chopped walnuts
 $\frac{1}{2}$ cup sweet cream

Boil until hard snap stage is reached or when it hardens on being dropped into water, stir in butter. Just before removing from the fire, add the vanilla and chopped nuts. Stir thoroughly and pour on buttered plates to cool.

FUDGE

2 cups sugar $\frac{3}{4}$ cup of milk
1 square chocolate (cut fine) 1 cup nuts
Pinch of salt $\frac{1}{4}$ cup honey
 $\frac{1}{4}$ cup of cream Butter size of a walnut

Boil sugar, chocolate, salt and milk for 5 minutes. Add honey and cook to soft ball stage (235 degrees F.). Add butter. Cool. Beat until creamy. Add nuts, pour on buttered pan, and when hard cut in squares. Good fudge should be of very smooth texture, not in the least granular and soft enough to cut into even pieces without breaking. The use of honey in fudge is advisable because it gives the fudge a smoother texture and will aid in keeping it moist. The temperature at which fudge is beaten is a very important factor.

Large sugar crystals will form and the fudge become grainy if stirred while hot. Always allow to cool—then the crystals will be small and the fudge creamy.

TAFFY

1 $\frac{1}{2}$ cups sugar 2 teaspoons butter
 $\frac{1}{2}$ cup honey $\frac{1}{2}$ teaspoon vanilla
 $\frac{3}{4}$ cup water

Heat honey, sugar, and water, stirring until sugar is dissolved. Cook until mixture is brittle (278 degrees F.), then add butter and vanilla. Pour on oiled pan. Cook until it can be handled. Pull until porous. Cut in one-inch pieces.

CRACKER JACK

1 cup of brown sugar 1 cup of extracted honey
Boil until it hardens when dropped into cold water. Remove from stove and stir in 1-2 teaspoon of soda. Stir in all the popcorn it will take; spread on greased tins and mark in squares.

JAMS, JELLIES AND PRESERVES

All honey may be used in making jams, jellies and preserves. A combination of 1-4 to 1-2 honey and the remaining part sugar generally gives somewhat better results.

These products must be cooked proportionally longer to get the desired consistency because of the greater water content of the honey.

Honey has a tendency to foam and "boil over" when used in making jam, jellies and preserves. Because of this danger care should be exercised at the beginning of the cooking period.

In canning fruits, honey may be substituted for 1-4 to 1-2 of the sugar normally used.

GINGER PEARS

Use hard or under-ripe pears. Wash, pare, core and cut into very thin slices. Use the following proportions:

- 2 pounds thinly sliced pears
- 2 pounds (2 2/3 cups) honey (or part honey and part sugar)
- 1/4 cup water
- 1 lemon (the rind should be cut into very thin strips)
- 1/2 ounce ginger root cut into small pieces

Simmer the materials together until as thick as a marmalade. Seal in hot, sterilized jars.

BAKED PEACHES

- 20 peaches
- 1 1/2 cups honey
- 1 1/2 cups sugar

Use a small round roaster which holds about 20 peaches. Wash them thoroughly to get the fuzz off but do not peel them, leave the peaches whole. Add honey (light) and granulated sugar, enough water to cover bottom of pan which forms a delicious syrup. Bake in hot oven till done (test with silver fork). Fill in hot jars, cover with syrup and seal.

STEWED APRICOTS

- 1/2 pound apricots
- 3 cups water
- 1/4 cup honey

Soak apricots in water for several hours, then simmer until soft. Remove from heat and add honey immediately. Allow to stand several hours before serving.

BAKED APPLES

Bake apples with bit of water until tender. Remove from oven, drip honey over open portion of hot apples. The hot apples will readily absorb the honey and by the time of serving the honey will have permeated the apple tissue and blended to form a perfectly delightful flavored dish. Wash and core apples and remove both blossom and stem ends. Pare one circle around blossom end.

VINEGAR

- 15 pounds honey
- 10 gallons water
- 3/4 ounce ammonium phosphate
- 3 yeast cakes
- 3/4 ounce potassium tartrate
- Mother vinegar

Add the honey to the water and bring the mixture to the boiling point. Pour into a clean barrel.

Dissolve three yeast cakes in lukewarm water and add to the honey solution after the solution has become cool.

Stir the potassium tartrate and ammonium phosphate into the solution.

Place a few blocks of clean wood on the honey solution and put the mother of vinegar on the blocks so that a part of the "mother" is in contact with the liquid. Cover the barrel tightly with a cloth to keep out insects.

REPORT FROM SECRETARY-TREASURER

It might be of interest to our members to know just what counties have the largest amount of members in the Penna. State Beekeepers Association. The following are the figures according to my records: 31—York County; 20—Allegheny County; 19—Berks County; 18—Cambria County; 18—Blair County; 18—Cumberland County.

I would like to see every County make a drive to try to get more members, and if there is any worthwhile change I will again list the highest counties in next issue of Penna. Beekeeper.

It is needless to say there is a Beekeeper Association in each of the above listed counties, as well as other counties not listed. If there is not an association in your county I urge you to take steps to start one at once.

I would like to hear from all counties that are working on getting appropriations for inspection from County Commissioners and how you are progressing. This is the time of year when the Commissioners are making up their budgets for the following year. I have heard of several counties having a promise of appropriations, others working on it.

Do not forget to save plenty of honey for exhibit at Harrisburg, January 20-24, 1936, we want to make it bigger and better than ever.

Slogan—Every Member Get Another Member.

THE NATIONAL MEETINGS

The meeting of the League and the American Honey Institute at Detroit was well attended and the program was very attractive. Speakers were present from the South, Canada, and many states of the North. Plans are under way for the next winter meeting to be held in Texas next fall. Mr. Burleson of Texas was elected President for the coming year. This next meeting will undoubtedly be well attended by northern beekeepers who wish to combine pleasure and business and see the south.

The beekeepers attending the Detroit meeting had the pleasure of seeing the big celebration following the world series. Over a half million people milled about Detroit and took part in the celebration.

E. H. Socks, Biglerville, Pa.

NOTES FROM BLAIR COUNTY

By Frederick Hahman

The summer meeting of the County Association was held in the afternoon of July 6th, at the apiary of Frederick Hahman, at Ant Hill, with 26 members present, also a number of interested visitors.

This meeting was called by the Executive Committee, to be held during the height of the clover nectar flow. Some doubt was expressed that it would be an inopportune time, because the members might be loath to leave home during a busy time, however, such fears were not realized, an interesting time was had with an enthusiastic attendance.

One of the points that decided the Executive Committee to try it out was the fact that bees were more tractable than when the flow was tapering off. These expectations were fully realized, the hives were opened, the combs removed, the supers of comb honey examined, the merits of Italian and Carniolan bees discussed, as well as differences of colony conditions noted.

The management of colonies to circumvent swarming brought forth many divergent views, altho nothing of a positive nature. To have colonies headed by young queens seemed to be the favored advice. During all of these manipulations the bees were models of behavior, not a sting was reported.

The business meeting was called to order by the President.

Secretary Garvey read the minutes of the previous meeting which were approved. He explained about the offer of the State Association, that, if ten

members of a local Association would join at one time, a fee of only fifty cents would be exacted. The required number was readily obtained.

A poll of the members regarding the outcome of the honey crop resulted in an even division as to good and fair, 50 lbs. being set as the dividing line.

It must be noted that altho the clovers early in the spring gave promise of a bumper crop, these expectations were not apparent later on. During the month of May there was much chilly weather. At the time of the blooming season of the clovers, part of the county suffered from drought, while other parts suffered from excessive moisture, caused by frequent and heavy rains.

A. F. B. came in for considerable discussion. The act of Assembly for securing help from the County Commissioners, to combat bee diseases was taken up. It was the sentiment, that the Commissioners be made aware of the need of some assistance on their part.

Mr. J. D. Hench, of Ilyswen, outlined a scheme of licensing the beekeepers of the State. Considerable opposition was voiced to the plan, for fear that it might result into a political problem, however. Mr. Hench would not be downed, his main contention being, that every beekeeper in the State of Pennsylvania, would be listed by the regular assessors, resulting, that the many small careless beekeepers would be located, and the small assessment which he advocated, would drive them out of keeping bees.

Mr. Hench also contended that the size of apiaries in the state was limited and not of sufficient importance to form a project for political exploitation, therefor, could be held down to a small annual fee, but would be a great forward move in eradicating bee diseases.

The Treasurers Report showed the finances of the Association to be in a healthy condition.

After other minor discussions and talks the meeting was adjourned.

THE STATE PICNIC AT LANCASTER

The State Picnic at Lancaster turned out to be very successful in spite of the threatening weather that morning.

Several speakers were present who had not been listed on the published program.

Mr. Falafield of the A. I. Root Company gave a brief discussion of marketing and mentioned the fact that the office of the Root Company at Philadelphia was closed due to the death of Mr. Swanson. The materials on hand going to New York and Norfolk.

Miss Florence McNaughton, of the Perry County 4-H Bee Club, talked briefly about the work of their bee club and the success the club members are having.

Mr. Brown, of Cape May Court House, donated four queens which were auctioned off by Mr. Charles Hess for \$1.50, the proceeds going to the American Honey Institute. Many prizes were offered for the winners of the numerous contests, the queens were donated by J. B. Hollopeter, Rockton, Pennsylvania, and Jasper Knight, Haynesville, Alabama. The bee supplies were donated by Schells, A. I. Root Company; other prize materials were obtained by Charles Hess, President of the Lancaster Association. The winner of the smoker contest was an Adams County beekeeper.

Beekeepers were present from many counties of Pennsylvania and some from New York making a total attendance of 250. Everybody seemed to enjoy the program very much.

THE NORTH WESTERN FIELD DAY

The North Western Field Day drew a large crowd as usual over 225 being present.

The demonstrations on packing and grading were given in the morning followed by the basket picnic.

The speakers of the afternoon were Mr. Keil, our Secretary, who spoke about the new bee law and the program for getting new members for the State Association through the County Associations.

Mr. Deyell, Editor of Gleanings, also gave a very interesting talk on management.

A large number of prizes were offered for the winner of the different games.

REVIEW OF THE SEASON

The buckwheat honey flow was very spotted in Pennsylvania the same as it was in New York and Canada. Some beekeepers reported a crop above average while others obtained very little. The crop as a whole is below that harvested last year and below average.

The fall flow was good over the entire state and quite a little above average for the southern part of the state. Many colonies of bees in southern Pennsylvania were short of food in early September but are now over-flowing with honey so that they have little if any space left for feeding sugar syrup. In fact many colonies are very short of bees because of the scarcity of honey in August and the over-abundance gathered from the fall flow in September and October. The space that should be used for late brood rearing has been filled with nectar so that brood rearing has been retarded.

Unless the queens begin laying again in November as they do some seasons, many packages will have to be purchased next spring to strengthen weak colonies and replace winter losses.

The honey flow is still fairly heavy in southern Pennsylvania, (on the 18th of October), this is a season very similar to that of 1928 when the large crop was harvested from the white aster in late fall. This late fall honey is rather light in color and has a fair flavor, being considerably stronger in flavor than the early honey.

The Marsh Marigold honey flow began heavy and looked promising but was cut short due to the effect of the tropical storms which did much damage in the Islands south of Florida. The total production from this honey flow was below normal.

There is a very good demand for all honey and especially for light honey including both comb and extracted. Light honey is scarce this season. The price, however, is not holding up as it should when the honey crop is below average. There are always a number of distress shipments in fall which have a tendency to bring down the prices for all honey.

The beekeepers in neighboring states and in Canada have harvested a crop about 60 per cent. of that harvested last season. The honey is darker than it was last year in these areas the same as it is in Pennsylvania.

Comb honey produced in the fall should be sold as soon as possible since it will be the first to crystalize.

HONEYDEW HONEY

If any beekeeper has honeydew honey which was gathered from evergreens there is a company in Austria, Europe, that is interested in buying honeydew of this kind. You can get in touch with Edwin J. Anderson if you have the right kind of honeydew.

BRADFORD COUNTY NOTES

By Harry W. Beaver

Another season past, registering the forty-second year in my beekeeping experience, and though we might wish we knew just what the seasons were going to be, still if we knew, we would lose a lot of fun guessing.

That is just what makes beekeeping attractive to us beekeepers. If one does not enjoy the uncertainty of beekeeping he will not stay long in the business. This season was no different in that there was plenty of uncertainty in it. Our bees with the exception of several yards came out of packing strong in bees. Early minor plants gave honey to keep brood rearing up in fine shape. Clover looked fine and basswood promised half a crop. Well, clover began yielding honey on the run then when supers were little better than half full, came York State floods and clover flow ended and basswood did not begin. Result: sixty per cent. of a crop.

Buckwheat did better really than we deserved, as our supers were about all filled, and that is not the best of beekeeping, as there should always be some room left at the end of the season, or there is danger of losing part of the crop that might have come. Our beloved Dr. Miller made a practice of having an empty super on top of his hives as a safety valve, and many times the bees would build comb in it where otherwise they would have been loafing or developing the swarming fever.

The fall flow from goldenrod has been intermittently good and the hives are well stocked for winter with both bees and honey.

We will not begin packing till the weather cools down a bit. I do not like to put bees in packing too early, as they are easier handled when it is cold, say forty-two F. or colder. Then too they remain quieter if they have a good freeze before being packed.

Honey has been moving in a satisfactory manner, and although prices are very little higher than last year, I for one believe that we are better off with reasonable prices and high consumption than high prices and low consumption. For I believe we will not see prosperity till we have increased production in all lines of endeavor.

Just now we are looking forward to the big meeting at Harrisburg next January, unless things shape up for another trip south.

Had a caller last week in the person of R. D. Horton, of Blossburg, Pa., who is still an enthusiastic beekeeper at the age of 89. It was indeed a pleasure to have a visit with this keen minded friendly neighbor.

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Make Final Arrangements for Farm Show

It is time now to make final arrangements for displaying your honey at Harrisburg; select the honey to go, plan the arrangement of the exhibit, etc. Be sure your entry blanks have been sent to the Director of the Farm Show before January 17th.

We are expecting a large attendance at the winter meeting in January. The program is very attractive and your friends will be expecting to see you there.

THE WINTER MEETINGS

Pennsylvania State Beekeepers' Association
Room D. Farm Show Building, January 22-23

WEDNESDAY MORNING AT 10:00

Meeting called to order by the President—Edwin J. Anderson, State College, Pa.
Convocation—Reverend H. M. Snavely, First Church of the Brethern, Carlisle, Pa.

Address of Welcome—Honorable J. Hansell French, Sec'y of Agriculture, Dept. of Agriculture, Harrisburg, Pa.

Extracting Honey at the Out-Apiaries—Harry Beaver, Troy, Pa.

Trucking Bees for Pollination—Howard M. Myers, Ransomville, N. Y.

Secretary-Treasurer's Report—A. T. Keil, Mars, Pa.

WEDNESDAY AFTERNOON AT 1:30

President's Address—Edwin J. Anderson, State College, Pa.

Co-operation Among Beekeepers—Charles Hess, Rothsville, Pa.

What the Individual Beekeeper Can Do to Advertise Honey—John Fleck, 625 Kirtland Street, Pittsburgh, Pa.

Report of Apiary Inspection in Pennsylvania—H. B. Kirk, Apiculturist, Dept. of Agriculture, Harrisburg, Pa.

The Grading of Honey for Color—Dr. E. F. Phillips, Professor of Apiculture, Cornell University, Ithaca, N. Y.

General Discussions—What changes, if any, should be made in the apiary prize list of the State Farm Show? When should members be dropped from membership for non-payment of dues?

WEDNESDAY EVENING AT 6:30

Beekeepers' Banquet—At Jackson's Domestic Science Kitchen, 206 Walnut Street. Dr. E. F. Phillips, toastmaster.

Remarks—D. C. Babcock, Representing The A. I. Root Company; Jere C. Frazer, Representing The G. B. Lewis Company.

Visiting Beekeepers in Central Europe—E. F. Phillips, Professor of Apiculture, Cornell University, Ithaca, N. Y.

Music—

The menu for the banquet is as follows:

Fresh Shrimp Cocktail
Cream Slaw
Baked Beef Loaf with Gravy
Mashed Potatoes
Buttered Green Beans
Pineapple Salad
Rolls and Butter
Ice Cream Coffee

The price of the banquet will be \$.75.

THURSDAY MORNING AT 9:30

The Value and Satisfaction of Apiary Records—Enos H. Hess, Mechanicsburg, Pa.

Advertising and Selling Honey at Fairs and Food Shows—D. C. Babcock, Advertising Manager, The A. I. Root Company, Medina, Ohio.

Uses of Beeswax—Jere C. Frazer, In Charge of G. B. Lewis Co., Branch Office, Wheeling, W. Va.

Introducing Package Bees—Prof. Edwin J. Anderson, State College, Penna.

My Experience in Wintering Bees—Howard M. Myers, Producer of High Quality Fruits and Honey, Ransomville, N. Y.

Election of Officers.

THURSDAY AFTERNOON AT 1:30

The Use of Honey in Bible Times—Rev. H. M. Snavely, First Church of the Brethren, Carlisle, Pa.

Some Physical Properties of Honey—Dr. E. F. Phillips, Professor of Apiculture, Cornell University, Ithaca, N. Y.

Honey Production in Ohio and Michigan for 1935—A. T. Keil, Apiarist, Treesdale Farms, Mars, Pa.

Business Session—

Changes in the program may be made to accommodate visiting speakers or those who must leave to make train connections.

The two following articles have been carried over from last winter's Farm Show. There has not been space before for them.

A FEW REMARKS

By M. G. Dadant, of the Dadant & Sons, Hamilton, Ill.

This is my first trip to Pennsylvania and I am particularly glad to compliment you on your exhibit. I have seen larger, but I do not believe that I have seen one as varied, or neater, or nicer.

At the American Bee Journal office we are celebrating the diamond jubilee of that magazine. It is now just seventy-five years since Samuel Wagner conceived the idea that American beekeepers needed a bee magazine in which to

discuss their problems; a magazine to tell of the wonderful inventions which were to revolutionize beekeeping.

Beekeepers of that day caught eagerly at these new inventions which were just appearing.

Langstroth in 1851 had evolved the movable-comb hive. Until that time chunk honey from box hives had been the only honey on the market. It is true that in Europe they had had combs in a sort of frame, but the hives were all with side opening, the combs had to be removed one by one from the side, or were made on hinges like the Huber leaf hive. Langstroth's top opening was the first practical success. Something that could really be used generally. This was followed by the invention of the bee comb foundation by Mehring in 1857.

Taking advantage of Langstroth's invention, beekeepers all over the United States had broken up box hives, cut out the worker comb, placed it in frames, and made Langstroth hives, top opening. Bee comb foundation, made it possible to give the swarms a guide which they could follow both in brood chamber and in supers.

No more had these two great inventions come than they were followed by the honey extractor invented by Hruschka in 1867. This completed the change. Honey up to the time of the honey extractor had sold at from 20 to 30 cents a pound. After the first few years in which the extractor was being firmly introduced, the honey prices fell to a level of 10 cents or below for white extracted in large lots. It has only gone once above that figure, and that was during the World War, when all prices went out of proportion to the usual run.

To me, beekeeping, from those earlier years went through a period of gradual evolution, added to by discoveries and inventions as time went on. Comb honey sections and bulk comb honey became known, out-apiaries were established. But beekeeping as a whole was not so much concerned with general apiary system management as with the handling and management of the individual colony.

The country was young, flora was abundant, the soil had lost none of its necessary ingredients through constant use. The honey plants were there. They yielded. The beekeeper was sure of a good location most anywhere. The natural flora assured it. It lay with the individual beekeeper whether he would concentrate on a few colonies as a sideline, or handle a few hundred colonies by an out-apiary system. Smaller brood chambers gave way to larger ones, but colony management was uppermost. If we go back to the reports of the earlier bee meetings, we will find the discussions dwelt on bee behavior, colony handling, etc.

To my mind that is the significant thing about the present period in American beekeeping! Among the extensive beekeepers, no longer does colony management assume the importance that it did. Or rather, might I say, that colony management is a self understood part of beekeeping, and the apiarist now goes further into the problems of apiary systems. How to best handle five hundred or two thousand colonies as a matter of business.

We have a changing system of apiculture, just as we have had a changing system of agriculture. And what has brought this about? I think three things. Automobiles and trucks, package bees, and changing floral conditions.

With package bees and queens now so readily available, no longer is painstaking work on saving and building the weak sister colony in spring so important. There are more urgent things to do. Dollar and cents things. Either double up that weak colony or give it three or four pounds of bees from the South and force it out of its doldrums.

Make increase by divisions? No, keep your strong colonies and build them stronger for the flow. Increase by packages, and place on such increase, the

burden of building up, itself. Why disturb the balance of the apiary system by such means.

And we are even confronted with the question of whether it is advisable to try to winter the bees. Wintering is a big expense in the north in honey, in cellars or packing, and possibly in losses of the colonies themselves. Why not chuck it all. Kill the bees in the fall and start again in the spring with packages from the South.

Some locations, some apiary systems may admit of this practice, others may not. It should be studied thoroughly.

This summer I had the pleasure of visiting Mr. Ira D. Bartlett of Michigan, who runs some 900 colonies of bees and is killing all his bees each fall, starting again with packages in the spring. A story of how he does it will appear in the February issue of the American Bee Journal. You may want to read it.

I wouldn't advise every beekeeper in the north to try Mr. Bartlett's methods. Neither would he. Yet it is an interesting departure. Similar systems of destroying the bees are also practiced by a number of large beekeepers in Canada.

With the coming of the automobile; what a change. The confines of an out-apiary system were, with the horse and wagon, fifteen or twenty miles. Now they are a hundred or two hundred or even more. Seldom an out-apiary with its honey house and extracting plant.

In fact Mr. E. G. Brown, of Iowa, is about the only thousand colony beekeeper I know who still has a honey house at each yard and does his extracting there. And even in his case, he has a mobile extracting outfit which he moves from one house to the next to save duplicate outfits.

Instead, the central plant with big power extractors, steam, hot water pumps, big settling tanks.

No more is the beekeeper confined to the flora of the country immediately surrounding him. No honey here—he scouts, and promptly moves a hundred miles where the flora is better. Does he want a good location for spring, he sees that his bees get it by placing them accordingly. Not a few beekeepers now concentrate their bees in one or two choice spots for the spring building up, then scatter them far and wide for the main surplus flows.

And the honey flora. No more can the beekeeper count that the basswood in the timber will give me about so much surplus, that white clover should prove good this year, that he is still in the old sure fall location. Those locations are changing from year to year. The fall locations are drained, the mesquite of South Texas is cleaned out. The timbers of basswood are gone. A changed system of agriculture leaves very little sweet clover in Alabama, once the world center for sweet clover seed growing.

You know sweet clover first flourished at its best in central Alabama. From there was shipped the first carload of sweet clover seed, in the days when sweet clover seed was in heavy demand on account of its first use by the farmer as a soil builder. I had occasion to go into that very territory three or four years ago. Practically all the sweet clover had disappeared. The section had become a dairy and cattle country, and the stock had completely cleaned out the sweet clover on the waste lands. This is the big bee breeding and queen rearing location, and they are obliged to do much feeding now on account of the flora change.

Even he cannot be sure of sweet clover in the prairie and plains area of the North. One year thousands of acres of sweet clover, the next year, all plowed up and put into corn and grains, as has happened to several beekeepers in the Dakota-Minnesota areas the past few years.

It makes one wonder whether in the future, the beekeeper will be justified in building himself a fine central plant only to be euchred out of its advantages by a changing flora, by a necessity to move his base of operations nearer to the center of his chosen fields. It makes one wonder if beekeeping may not become nomadic, shifting over a wide territory with the shifting flora, being satisfied with a makeshift honey house and quickly movable equipment instead of the ideal permanent set-up.

And with all this changing in the general system of extensive beekeeping come problems which now more than ever need a solution. First bee disease—American Foulbrood. With permanent locations it was far easier to inspect a neighborhood and gradually work towards a freedom from the disease problem. Now, with a change of location decided upon almost overnight, the danger of picking up infection becomes increased many fold. While our efficient inspectors are able to keep disease in check, they have never yet completely eradicated it for any great length of time from any large fixed honey producing area, any more than the chinch bugs or the codling moth have been eradicated. But agriculture is slowly meeting its pests by breeding disease resistant strains. Chickens resistant to diarrhoea, strains of corn that will yield in spite of the bugs, and now fruit men talk even of the strains of apples like the Winesap which shows greatest resistance to the moth. But the fruit men have a long time problem, young and old orchards which are a heavy investment, cannot be changed overnight. But with our bees, they are changed by replacement two or three times a year.

The older countries of Europe although they have bee disease do not consider it the problem that we do here in the United States. Isn't it because the bees have been naturally selected through the years? When a section became infected, the susceptible disappeared, the resistant survived. Through the centuries a disease resistant strain was built up by the survival of the fittest. But with our modern methods of breeding queens and selling them far and wide over the country, isn't there danger that we have scattered far and wide susceptible strains while we were breeding for color, wintering, and honey gathering?

What a wonderful chance to work on disease resistance, if we can locate a few foundation colonies which show even a little resistance to disease germs. In the meantime let us back our inspectors to the limit in their eradication programs.

Our modern system of eliminating the non-producing colony; of making our increase with southern packages, has brought another so far, unsolved problem. How to get around the losses from supersedure in shipped queens and in package bees. Package men have attained a high degree of success in getting their packages to destination in first class condition, and on time.

But it will take much study and plenty of co-operation between the breeder and the buyer, before the bugaboo of failing queens will be permanently solved by getting to the foundation of the cause for such losses, dwindling packages, queens disappearing or turning drone-layers, two weeks, a month, maybe two months after receipt, resulting in a non-producing colony, loss of a year's time and honey crop for the beekeeper, as well as loss of the interest on his equipment, and worst of all possible serious misunderstanding between shipper and receiver.

To my mind this is one of the most serious problems of present beekeeping, and one which, when solved should give such impetus to the package business as it has never had before, even during those boom war times. If small and large beekeepers could be assured of producing colonies in 95 per cent. of the packages received, his would be a much rosier outlook for a successful season.

The third problem which I think the present system of beekeeping calls for solution is that of soils, climate and honeyflows. We have excellent mater-

ial telling us of the honey plants, their blooming periods, the type of nectar they produce. But we are lacking in information on why they produce on some soils and not on others. Why is it, for instance that buckwheat yields seldom in Illinois, almost always in Pennsylvania? Why didn't the sweet clover produce around our home place in 1934, but gave a tremendous crop 90 miles away?

Why is alfalfa not a honey yielder in the central west and east? Why, then, did it yield in Illinois this year for the first time? Is it becoming acclimated, or was it the extreme drought?

Why are the fields white with Dutch white clover some years and yet very little honey in it? Other years it may be relatively scarce and give a good crop.

These are questions that the big beekeeper wants to know. Earlier it made no difference. He had to stay put anyway. Now, if he knows the answer, he can prepare a second set of plans to move his outfit where soil, climate, rainfall and flowers will more nearly insure against a failure.

And lastly, our marketing system. Not so many years ago, creamery butter was a scarcity. The average housewife wouldn't have it around. Home made country butter was the thing. But soon we got a uniformity in the creamery butter that we could not get in the home made. We were sure of a sterile product.

The country butter might be fine one week, rancid the next. And the country folks got tired of making it too. Too much work when you could sell your cream right at the door to the creamery.

As a result, 95 per cent. of the butter sold now is creamery product. It is standard. And it sells at a uniform price. No job lots on the market having a bearish effect on the creamery's product. As a result everyone does better. If the creamery gets too low on its prices for cream, the co-operative springs up and corrects the trouble.

To my mind this is the very thing that will have to happen with the honey industry. We have too many cut-throat prices among beekeepers. Honey selling needs to be put into the hands of the expert packer, the expert salesman, who can maintain a stable price, a uniform product, and at all seasons of the year.

If the packer gets too independent in the prices he pays for his honey, or at the prices at which he sells, competition will take care of that. Co-operative competition if necessary. But we do have to get rid of this haphazard way of dumping honey at any price, just because it was produced in the idle time without any heavy costs attached.

The older beekeepers of Langstroth's and Quinby's age lived at an interesting time for beekeepers. They were principally concerned with colony management, in working out the individual problems.

We are in as interesting a time. But our problem is in studying and working our systems. Plenty of interesting problems for us all.

COMB HONEY PRODUCTION BY THE DEMAREE METHOD

By Frederick Hahman, Altoona, Pa.

Pennsylvania consumes more extracted honey than comb honey, possibly produces more extracted honey than comb honey, however, there is no question that the number of beekeepers who raise comb honey, far exceed the number of beekeepers that are engaged in the production of extracted honey. It is seemly to keep in mind, how to obtain the best results, with the least expenditure of labor, to harvest a maximum crop, if comb honey is the goal aimed at.

In our Bee Journals, the Demaree method is frequently referred to. To understand this method, we can see in the current January number of the "American Bee Journal," a reprint of Mr. G. W. Demaree's article originally published in the April 1892 number of that Journal, under the title of "How to prevent Swarming."

The swarming problem has generally been the stumbling block, before the late Mr. George S. Demuth, former editor of "Gleanings in Bee Culture," expounded to us, why bees swarmed. One of his most concise and convincingly written articles appeared in the April 1932 number of the "American Bee Journal," under the heading "Bees in the Brood Nest the Cause of Swarming." The conditions that bring about swarming, Mr. Demuth tells us, is the result of a congestion of bees in the brood chamber, not young bees, but bees especially of the field workers.

During the building up process the queen must have plenty combs available for egg laying. The storing impulse must be maintained, designated by Mr. Demuth as colony morale, until the advent of the white honey flow early in June.

There are numerous ways of applying the Demaree Method. The one that has given me the best results, was published in "Gleanings in Bee Culture" in the May number of 1930, contributed by Mr. H. H. Hill, of Mesa, Colorado, under the heading "The Demaree Plan for Comb Honey."

To those not in a position to refer to Mr. Hill's article, I will endeavor to give a brief outline of the same. Quoting Mr. Hill.

"When the time for supering has arrived, the combs containing mostly hatching brood, are selected, placed into a hive body, with their queen, next above are given two comb honey supers, on top of these supers is placed a tight inner cover, having two 3-8 inch holes bored as near the rim as possible, one on each side, on top of this board is placed the "Demaree" brood, no queen excluder is used between the lower brood chamber and the comb honey supers. In this manner traffic between the upper brood chamber and the supers is directed to the sides of the supers, avoiding all travel stain of the sections. In this case it is rare for the queen to find her way "Upstairs." The brood there emerges normally, and only enough bees are drawn from the supers to care for it"

We pay no attention to any queen cells started there. The bees will start a few worthless cells, but will take care to dispose of any virgin before they become a menace to their mother below."

"No honey, beyond that actually used in the feeding of their brood, is carried up if supering is properly taken care of. This is a valuable consideration for the comb honey specialist."

"Our swarm prevention efforts are made easier since the adoption of this plan. Instead of shaking onto combs containing thin honey, foundation, or empty combs, if we find the colony preparing to swarm, we cut all queen cells found "upstairs," put the queen in this chamber and place it on the bottom board, the supers are then added, followed by the perforated board, a full size queen excluding board, and the transposed brood chamber, just a word of caution is necessary here. It is important to shake most of the bees from the chamber taken from the bottom board, for, if it is warm weather, suffocation may take place before enough of the bees can find their way through the small holes to the supers. Shaking bees wanting to swarm upon capped brood has long been featured in swarm prevention practice."

On our next visit if we find small larvae in the queen cells, the performance is repeated. However, if advanced queen cells are found the bees are shaken upon a hive or shallow super of green honey and the brood is placed over the supers with the boards between as before outlined."

A CORRECTION

In the last issue reference was made to the three queens auctioned by Charles Hess at the State Picnic. The total amount for which the queens sold was about \$9.00 instead of \$1.50 as stated in Vol. 10, No. 3. Mr. Charles Hess also gave a short address during the afternoon session of the State Picnic.

TO THOSE WHO HELPED WITH THE PENNSYLVANIA BEEKEEPER

I wish to thank all who have assisted in any way in the preparing and publishing of the Pennsylvania Beekeeper during the year 1935. Mr. Beaver, of Troy, assisted with the printing and mailing, Mr. Kirk, of Harrisburg, took care of addressing the envelopes, and Mr. Keil, our secretary, assisted with the assembling of material. I wish to thank also those who contributed articles or rendered services of any kind.

—Edwin J. Anderson

PRELIMINARY REPORT OF APIARY INSPECTION 1935

A record of the apiary inspection work for the season of 1935, shows that 3,112 apiaries representing 23,284 colonies of bees, were inspected.

Nine hundred fifty-eight colonies in 384 apiaries were found infected with American foulbrood.

A detailed report showing comparative figures of work done in recent years will be contained in the next number of the Pennsylvania Beekeeper.

—By H. B. Kirk

ANOTHER VICTORY FOR THE APIARY INSPECTION SERVICE

One of our deputy inspectors, Allen M. Fleming, Corsica, Pennsylvania, was prosecuted recently by a beekeeper in Venango County for willfully and maliciously destroying property (burning bees and hives). The beekeeper also claimed damages to the extent of \$59.00.

Mr. Fleming was directed, by the chief apiary inspector, to destroy seven colonies of bees which were found, on a previous inspection, to be badly infected with American foulbrood. The customary 14-day notice was given to the beekeeper on first inspection. This notice was disregarded, hence the reason for directing the deputy inspector to burn.

This case was carried to the Venango County court and the indictment was quashed before the case was tried.

Our representative in the Department of Justice at Harrisburg assisted materially by furnishing a very able attorney to handle the case for the Department of Agriculture.—H. B. Kirk.

A FEW REMARKS FROM THE SECRETARY-TREASURER

Have never known the mice to be as plentiful as they are this year, which should remind all that the entrances to hives should be such as not to allow these pests to enter, anyone once having mice get into the hives, whether there are bees in or not, will never forget the destruction they can cause in a short time. I have learned my lesson.

I understand all Commercial space at Penna. State Farm Products Show Jan. 20-24, 1936, has been sold out some time ago, this would seem to indicate times are picking up, also understand there will not be additional space over last year for our Honey Display.

Don't forget all entry blanks for Apiary Products should be in to the office of the Director of the Farm Show, Harrisburg, Pa., not later than January 17th, 1936. Anyone not having a premium list may secure one from their County Agent or write to the Director. It is up to every beekeeper to send or bring whatever honey, etc. he can as we want a better display than ever, and in time we may be able to secure more space for our display. Judge of Apiary Products is Mr. Howard M. Myers, of Ransomville, N. Y., who will give us several talks during our two-day meetings, Jan. 22d and 23d.

Our membership has increased considerable during the last year, yet it is not anywhere near what it should be considering the number of beekeepers in Pennsylvania, amount of honey produced, etc. It is only by getting more members, thereby getting more money, that we can go ahead and accomplish things. It is my ambition to so build up the membership that we can put out our Publication at least six times a year and eventually monthly.

Beekeepers Associations have been starting and restarting and the following are what are in Pennsylvania at present according to my records: Those paying \$1.00 and thus having a member on the Executive Committee—Allegheny, Berks, Blair, Cumberland, Erie, Lancaster, Lehigh and York. Those having ten or more members and therefore the 50c rate—Cambria, Lawrence, Lebanon, Montgomery and Schuylkill. Those starting but not yet in the State Association—Beaver, Fayette, and Philadelphia.

One of our largest producers of honey is willing and has suggested that all honey producers donate \$1.00 per ton to American Honey Institute. This no doubt will be talked over at Annual Meeting. If you cannot be present write President Anderson your suggestions and willingness.

Hope to meet a large number of Beekeepers at Harrisburg Meeting.

—A. T. Kiel.

CUMBERLAND COUNTY NOTES

By Enos H. Hess

The season in our county for honey production was somewhat disappointing. The fruit bloom was abundant but it was wet and cold during the larger portion of the blooming period. There was little nectar obtained from dandelion for the same reason. There was a good flow and favorable weather during locust bloom. A colony I had on a scale gathered fourteen and a half pounds in one day and forty-four pounds during locust bloom week.

Most apiaries in this section report about two-thirds of a crop. My average yield for 98 colonies spring count was 50.8 pounds. My average for 19 years, 1917-1935, was 49.2 pounds. Hence I could report an average crop. Asters yielded well and the bees had, as a rule, sufficient stores for the winter. There were frequent rains during the fall, hence we would judge that the prospects for a crop next year are good.

LEHIGH COUNTY NOTES

By A. C. Trainer

Lehigh County has had about a 50 per cent. honey crop with an increased

demand for honey. At present we are almost sold out of our 1935 crop. I had to learn an old lesson all over again last season, I purchased some dandy queens in 1934 that produced a bumper crop the first season. It really hurt to kill them so I took a change and kept them for the 1935 season, the result was I had a lot of failing queens just at the time they should be at their best.

There are some real good recipes in the last issue of this journal. Have you tried some of them? We have and found them to be good.

Lehigh County had its County Commissioners all set for bee inspection late in the season of 1935. However, we have some new men in office since the election so we will have the job to do over again. The fruit growers are in favor of inspection so the appropriations are only about half as hard to get as if the beekeepers asked for them alone.

PHILADELPHIA COUNTY NOTES

By Emil F. Fernes

As was the case generally concerning Pennsylvania, the 1935 season started with excellent promise in March; the weather was all a beekeeper could wish for, and colonies were in as good shape as I have ever seen, despite the extreme cold of the previous winter. Brood rearing progressed at a gratifying rate, and we had hopes of a large crop from spring flowers, only to have them dashed to pieces by the cold, rainy weather which began in April. Because of the large amount of brood in the hives, induced by the warm days of March, stores of honey that would have been ample under ordinary conditions, suddenly became insufficient. Brood rearing was curtailed, colonies starved, and the end of April found the bees anything but ready to take advantage of the spring flows.

However, at the end of April, copious secretion of nectar by the maples gave the bees a fine stimulus, and those that survived built up to sufficient strength to store heavily from the tulip poplar, which, happily, bloomed somewhat later than usual. From thenceforth a slow but steady stream of nectar continued into the hives all summer. Little trouble was experienced from swarming, due, probably, to the easy, continuous flow.

September found the bees in good shape, with a fair amount of honey on the hives. Then, as if to compensate us for our spring losses, there opened the heaviest flow from goldenrod and aster that these parts had seen for years. Nectar poured into the hives and never stopped until well into October. Bees filled everything with honey, supers and brood chambers alike.

No sooner had we begun rejoicing when it was observed that due to the bees storing heavily in the brood chambers, the queens were honey bound, brood rearing had ceased from lack of laying room, and, as a result, colonies were going into winter without any young bees. This unfortunate condition was partly remedied in November, when, with the tapering off of the flow and the mild weather which then obtained, some queens again began to lay. An examination at that time showed some colonies with considerable new brood, while others still showed none at all. Nevertheless we trust that the winter may be mild and that the bees will pull through in good shape. Certainly there is enough in the hives and food chambers to prevent a repetition in 1936 of what occurred in the spring of '35.

Regarding marketing conditions here, honey is moving fairly well considering the competition in the Philadelphia market. Considerable honey from New York and the western states comes in here and is retailed by the chain stores at a very low price. This honey is of good color and flavor and as most of the honey produced here is either poor in color or in flavor, we, consequently, have a good deal of difficulty trying to retail this honey at a reasonable

figure. This difficulty may vanish when the city consumers who are accustomed to tasteless sweets, through long association with granulated sugar, come to appreciate a sweetening agent blessed with an endless variety of flavors. Whether such an appreciation will come about or not depends largely upon the beekeepers themselves. It is up to them to educate the consumers as to the superior qualities of honey as a sweetening agent.

SCHUYLKILL COUNTY NOTES

By D. C. Gilham

I am reminded of the remark of Mr. Charles Tollafeld from the Root Company at our State Association picnic this past summer, "That the beekeeper cannot produce and sell comb honey at \$.10 per section at a profit," and still some beekeepers are doing it with harm to themselves as well as every other beekeeper. Those beekeepers don't get the bee journals. Again I found the beekeeper who retails from door to door at \$.18 for 1-lb. section and refuses to sell to the merchant for less, therefore he should have asked more at retail.

Many stores in the coal regions claim business is poor on account of unsteady work at the mines. Sales of honey fair but not enough turn over for the time and the trips. Sales of honey candies help out on gross receipts on these trips. Have been fortunate enough to pick up trade with a large bakery using honey and have turned over 1320 pounds of off honey within the last six months that was too dark for bottling.

Sales of honey candies have picked up somewhat, several beekeepers selling considerable of my honey candies along with their own honey on their routes. This might be an idea or a suggestion for some other beekeepers who have honey routes and retail customers.

Have not had time to go out from door to door selling honey myself, but from sales made by my son and another party, I feel confident that the beekeeper can turn over a larger quantity of honey in this way than at wholesale to the merchant. Both methods help move our crop.

REVIEW OF THE SEASON

By H. M. Snively

Beekeeping Conditions and Practices in Cumberland County

There are approximately 175 beekeepers in Cumberland County. Many of these have only one or two colonies of bees, and some may still keep them in old box hives. There are, however, a number who keep bees for honey production, and with the abundance of honey plants in the county, have been successful in producing a fine quality of both section comb and extracted honey. The amount of honey produced this season was approximately sixty to seventy per cent. of normal. This was due to a number of causes.

The early spring seemed to start out pretty well until fruit bloom was about to start, then we had a season of heavy rains which practically kept the bees from getting any nectar from the fruit at all. This in many cases necessitated feeding; and where the beekeeper was not alert to this situation, it meant a loss or dwindling. The weather was cool and wet which retarded the locust bloom so much that the sweet clover and locust came out at about the same time. The main honey flow began in fair shape, but we soon had extreme heat with much moisture, which caused the humidity to increase. This condition has made honey ripening slower and much more difficult. It also is some cause of

the honey flow being less heavy; while it extends over a longer period of time, the extreme weather conditions decreased the honey production, this was especially true in the production of comb honey.

There was less swarming this season than during seasons when the honey flow was shorter and heavier. This made swarm control easier for the beekeeper. The writer had only one swarm issue during the season, while some beekeepers didn't have any.

The fall flow, which is mostly asters, was very heavy, and lasted until very late in the season. There was still some gathering in November. Where ample room was provided to avoid crowding the brood nest, the bees have gone into winter in fine shape. The writer migrated several colonies into the buckwheat region in August with favorable results. It would have been much better were it not for the rains during buckwheat bloom.

We have had a number of very helpful management meetings in various apiaries during the season. These were conducted by Prof. E. J. Anderson, Extension Apiarist, and arranged by Mr. W. Irwin Galt, County Agent. We also held a Field Day in which we invited adjoining counties to participate.

There is an optimistic attitude among the beekeepers for the coming season. Already several have expressed their intention to purchase more package bees in the spring. The honey market is fair now and with a little encouragement it will improve. We observed for the first time the National Honey Week with gratifying results. Mr. Anderson was with us a few days during the week. A survey of the grocery stores was made and several window displays were set up with live bees. The Association is planning now for the exhibit at the annual Farm Show in Harrisburg. A 4-H Bee Club was also organized in the spring.

The following extracts are from the Market News Service, United States Department of Agriculture.

Philadelphia: COMB: 460 lbs. N. Y., 420 lbs. Mich. arrived. Supplies light. Demand moderate. Sales to retailers—NEW YORK, white clover No. 1, 10-12-oz. \$4.00-4.25. MICHIGAN, White Clover, Fancy, 14-oz. \$4.50.

EXTRACTED: 1,000 lbs. Calif. arrived. Supplies light. Demand moderate, market about steady. Sales to confectioners, bakers and manufacturers—CALIFORNIA, Light Amber, Alfalfa 7c. NORTH and SOUTH DAKOTA, White Clover 8c. ILLINOIS, crystal jars blended White Sweet Clover and Basswood, 3-lb. \$4.15 per doz., 1-lb. \$1.75 per doz. PENNSYLVANIA, Mixed Flowers, Dark Amber 6c. PUERTO RICO, Light Amber in barrels 72-75c per gal.

BEESWAX: No arrivals. Sales by receivers—AFRICA, Mixed 23-24c—CALIFORNIA, Light 25 1-2c, Medium and Dark 24 1-2c.

PITTSBURGH: Arrivals by rail and truck: comb, 100 cases Mich.; extracted, 9,800 lbs. Mich., 5,970 lbs. bottled Midwestern.

COMB: Supplies light. Demand slow, market about steady. Jobbers sales to retailers—MICHIGAN, White Clover No. 1, cellophane-wrapped \$3.50-3.75.

EXTRACTED: Supplies moderate. Demand moderate, market steady. Brokers sales to jobbers, bakers' supply houses and large bakers—MICHIGAN, White Clover 8-8 1-4c. MIDWESTERN, White Clover, 1-lb. jars \$1.55-1.60 per doz., 14-oz. jars \$1.45-1.50 per doz., 5-lb. pails \$6.25-6.50 per doz.

BRADFORD COUNTY NOTES

By Harry W. Beaver

"Time marches on" even in the winter time. We have been busy marketing honey, rendering wax and picking up odd jobs that have been laid on the shelf during the busy season, such as repairing tools, hives, frames, roofs and buzzing up the wood pile, etc. etc. While we did not have so many foul brood combs to melt up this year, we did have a lot of crooked, unwired and drone combs that we dug out of some 75 colonies that I bought last spring. These frames will have to be replaced with new material, also several hundred of my own that have broken during the season. I find that where one has kept bees for thirty or more years, equipment begins to need replacement in considerable amount every year.

Our bees in this section have not had a flight since putting them in winter cases early in November, but as a rule they hardly ever do till the January thaw, and not always then especially on the higher levels.

Clover went into winter with plenty of moisture and is now well covered with snow, so we are already hoping for a clover honey crop next year. E. W. Alexander always said if we did our part, the Lord usually would do His part, and that if we would have our bees at top strength when the flow began there would be less short crops, and this is where I think adequate protection, honey and room, winter and spring, and young queens is half or perhaps the biggest part of the battle.

On December tenth and eleventh, wife and I attended the York State Convention at Syracuse and as usual picked up some good hints. One was the badge that every one that paid dues wore during the convention with name printed on, a good get acquainted stunt, hope we have them at the Harrisburg meeting. Then there was a registration fee of fifty cents which also paid membership dues for a year. Hope we can change our by-laws to do this, as I think it would stimulate attendance. They also had a honey cookery demonstration by Mrs. Jensen, of the American Honey Institute, which interested the ladies (and men too). Mrs. Logan, of the Kellogg Co., also demonstrated candy making, using honey. Mrs. Jensen gave a talk telling of the work and accomplishments of the Institute, to such good effect that the Association members pledged \$500.00 for institute work for 1936, or approximately \$1.00 per ton. I hope we will do no less at the Harrisburg meeting. I hope all who read this will send their dues and pledge to our secretary, A. T. Keil, Mars, Pa., or better still, bring it to the meeting January 22d and 23d.

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